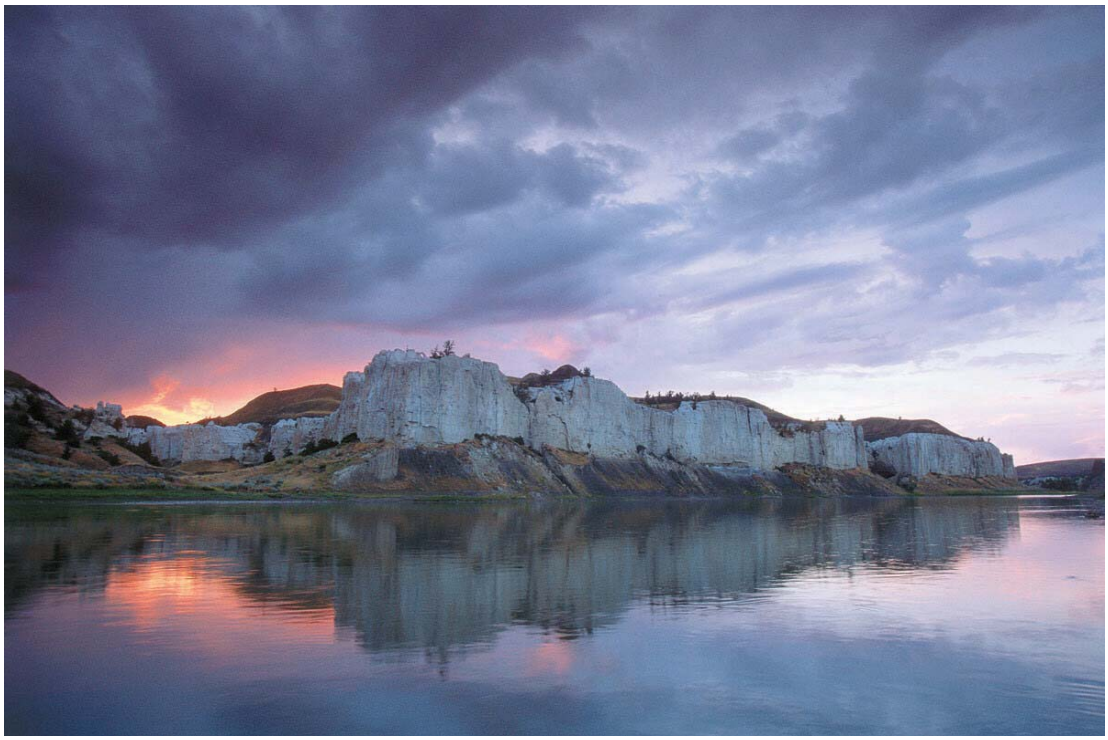
UPPER MISSOURI RIVER BREAKS NATIONAL MONUMENT

ANALYSIS OF THE MANAGEMENT SITUATION



June 30, 2003

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INTRODUCTION

This Analysis of the Management Situation for the Upper Missouri River Breaks National Monument (the Monument) is comprised of two sections, the resource description and current management. The material contained herein will be used in the preparation of the resource management plan and environmental impact statement for the Monument. This information may change due to monitoring, inventories, and corrections.

This information has been described in previous planning documents and other publications and is largely excerpted from those earlier documents, in particular, the Judith-Valley-Phillips Management Situation Analysis (1989), the West HiLine Management Situation Analysis (1986), and the Upper Missouri National Wild and Scenic River Cultural Resource Management Plan (1992).

AIR QUALITY

CURRENT MANAGEMENT

The BLM will comply with national and state air quality standards including Rangeland Health Standard #4. Existing air quality will be protected by the use of best management practices (see Appendix A) and best available control technology (BACT). BACT means those techniques and methods of controlling emission of pollutants from an existing or proposed source.

Rangeland Health Standard #4

This means that air quality on public lands helps meet the goals set out in the State of Montana Air Quality Implementation Plan. Efforts will be made to limit unnecessary emissions from existing and new point or non-point sources.

The BLM management actions or use authorizations do not contribute to air pollution that violates the quantitative or narrative Montana Air Quality Standards or contribute to deterioration of air quality in selected class area.

As indicated by:

Section 176(c) Clean Air Act which states that activities of all federal agencies must conform to the intent of the appropriate State Air Quality Implementation Plan and not:

- cause or contribute to any violations of ambient air quality standards
- increase the frequency of any existing violations
- impede the State's progress in meeting their air quality goals

Implementation

Federal and state regulations require air quality monitoring for activities which could degrade existing air quality. Detailed monitoring and mitigation plans are written when an activity plan is prepared. These measures generally require actions during specific wind conditions to either disperse smoke or prevent chemical spray drift.

CULTURAL RESOURCES

CURRENT MANAGEMENT

A number of laws and regulations provide the foundation for the Bureau of Land Management's (BLM) cultural resource management program. These include The Antiquities Act of 1906 (43 CFR 3), National Historic Preservation Act of 1966 as amended (36 CFR, 61, 63, and 800), National Environmental Policy Act of 1969, Federal Land Policy and Management Act of 1976, American Indian Religious Freedom Act of 1978, Archaeological Resources Protection Act of 1979 (43 CFR 7), and the Native American Graves Repatriation and Protection Act of 1990 (43CFR10). In terms of day-to-day BLM activities, the most important of these are the National Historic Preservation Act (NHPA) and the Federal Land Policy and Management Act (FLPMA). NHPA requires the BLM to perform cultural resource inventories and evaluations as part of the review process for Federal actions. FLPMA requires the BLM to periodically inventory its resources and develop plans for the allocation and use of these resources.

The BLM meets routine NHPA compliance obligations under a National Programmatic Agreement (1997) with the Advisory Council on Historic Preservation. Within the framework of the National agreement, a protocol was developed between the Montana BLM and the Montana State Historic Preservation Office (1998). The Montana Protocol specifies the manner that cultural resources are considered in day-to-day operations and provides for input from the Historic Preservation Office during planning.

Decisions affecting the management of cultural resources come from the State Director's Interim Guidance (BLM 2001), the West HiLine Resource Management Plan (RMP) (BLM 1988 and 1992), the Judith-Valley-Phillips RMP (BLM 1994), and the Upper Missouri National Wild and Scenic River Management Plan Update (BLM 1993).

State Director's Interim Guidance (BLM 2001)

The Monument Proclamation discusses the importance of the archaeological and historic resources within its boundaries. The Lewis and Clark and Nez Perce National Historic Trails, teepee rings and abandoned homesteads are also mentioned. The Proclamation states, "Remnants of this rich history are scattered throughout the monument, and the river corridor retains many of the same qualities and much of the same appearance today as it did then." The Proclamation further states, "Warning is hereby given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof."

Archaeological and historical sites, historic landscapes and legal traditional public uses of the monument will be preserved to the extent practical and consistent with other goals in the establishment of the monument. Inventory, study, excavation, stabilization and restoration will be permitted or administratively authorized to qualified groups and individuals.

The use of metal detectors inside the monument will not be allowed except by permit. A permit for metal detector use may be authorized by the Monument Manager when determined to be in the interest of the public and consistent with the preservation goals of the monument. Metal detectors, magnetometers or other remote sensing equipment may also be allowed for administrative purposes or public health and safety uses as determined by the Monument Manager.

West HiLine Resource Management Plan (BLM 1988 and 1992)

Cultural resources will be given full consideration in all land use planning and management decisions. The BLM will seek to ensure its undertakings avoid inadvertent damage to both Federal and non-Federal cultural resources.

The BLM will seek to preserve a representative sample of the full array of cultural resources for the benefit of scientific and socio-cultural use for present and future generations.

The West HiLine RMP provides the following guidance for cultural resources in the Upper Missouri National Wild and Scenic River (UMNWSR):

1. Historic sites will be evaluated and then monitored or maintained based on: their historic value, the attraction they have for visitors, and their use as safety shelters.

2. Prehistoric sites will be evaluated and then monitored, protected or excavated based on their scientific value and what they can add to knowledge and interpretation of the UMNWSR.

3. Historic and archaeological opportunities along the UMNWSR will be enhanced by developing interpretive potential at selected cultural sites. Resources will be selected based on access, information potential, and the potential to provide important parts of river history or prehistory via interpretation.

Upper Missouri National Wild and Scenic River Management Plan Update (BLM 1993)

Based on guidance from the River Plan Update, current management for cultural resources in the area has focused on a few cultural properties in the "high traffic" Missouri River.

The River Plan Update identifies the use of "Context" for managing and understanding the different types of cultural resources along the river.

The Missouri River is also the Lewis and Clark National Historic Trail. Markers have been placed along the river to mark approximate campsites during their expedition of 1805-6. While their expedition has always generated interest, it has peaked in recent years with the approaching bicentennial (1804-6 / 2004-6).

A segment of the Nez Perce National Historic Trail is also contained within the Monument. However, primary interpretive sites for this historic trail are outside the Monument. The nearest interpretive site is the Bearpaw Battlefield, located north of the Monument and south of Chinook, Montana.

The Monument also contains remnants of the agricultural development of the area. Early 20th century farms and ranches are concentrated along the Missouri River, but some examples are also located in the uplands. Several of these buildings have been stabilized or repaired, beginning in the late 1980s.

A study by Zane Fulbright (BLM 1998c) included an examination of BLM sites with standing buildings along the Upper Missouri. The study also resulted in a historic context for evaluating these properties and included recommendations for their future management. Building on this study, maintenance and stabilization work has been conducted at four historic properties: Hagadone, Middleton, Ervin, and Nelson. These four sites are considered eligible to the National Register of Historic Places. Their historic significance does not dictate their preservation, but does suggest that they be given a preference over similar properties.

Stabilization has also been undertaken at the Murray dugout, near PN Landing. This dugout is relatively recent in age and not historically significant. However, it is a popular stopover and is representative of the many historic dugouts along the Missouri River that are now collapsed. It therefore has historic interpretive value, though it is not historic.

Currently, on-site interpretive displays for cultural or historical sites are minimal within the Monument. The primary source of historic information for visitors to the Monument is the Upper Missouri River History Digest (Monahan and Biggs 1997).

Judith-Valley-Phillips Resource Management Plan (BLM 1994)

The cultural resource management program has two components: compliance with existing laws/regulations, and the management of cultural properties on BLM land.

Two Cultural Resource Management Plans will be prepared, one for the Malta Field Office and one for the Lewistown Field Office. The purpose is to assign cultural resources to particular uses and to assess and to establish thresholds for determining cultural property significance. The Cultural Resource Management Plans will establish the management prescriptions best suited for fulfilling management goals and objectives.

The BLM will ensure that all proposed actions, initiated or authorized by the BLM, avoid damage to Federal and non-Federal cultural resources. The BLM will determine, based on inventory and evaluation data, whether the proposed action will impact important cultural resources and, if necessary, take steps to avoid or mitigate possible impacts, consistent with the uses attributable to the cultural resource.

The BLM will consult with Native American tribes when its actions have the potential to affect areas of concern to the practitioners of traditional religions. In the Monument, that consultation

will require contact with the Fort Belknap, Fort Peck and Rocky Boy's Reservations and possibly other tribes. The activities of concern are those which might cause degradation to the visual or aesthetic nature of an area, or cause the loss of plant species or other resources important to Native Americans. The BLM is required to consult with traditional religious practitioners on policies and procedures to determine if changes are needed to ensure that such rights and freedoms are not abridged by agency practices.

The primary management objectives are to properly manage the cultural resources under BLM jurisdiction through a systematic program of identification and evaluation, and to reduce the level of conflict between cultural resources and other land and resource uses. All cultural resources within the area are segregated into management objectives. These objectives include managing for information potential, managing for public values, and managing for conservation.

Cultural resources which contain significant information on the prehistory and history of the area will be managed for their information potential. These are cultural properties that consist of artifacts and features on the surface and/or are buried that have the potential to yield important information.

Cultural resources that possess sociocultural, educational and recreational attributes will be managed for their public values. These include cultural resources associated with traditional Native American cultural values, and prehistoric or historic cultural properties which exhibit interpretive and/or recreational potential. Managing cultural properties used by Native Americans will focus on avoiding uses incompatible with traditional values.

Special or unique cultural resources will be managed for their public values and conservation. These include cultural properties that contain sensitive prehistoric religious features such as medicine wheels or burials; cultural properties that are of a nature that would not permit current archaeological technology to adequately investigate the property; and cultural properties that are rare in the area.

Allocation of cultural resources to specific uses will be completed during cultural resource management planning. There are six use categories for cultural resources: Scientific Use, Conservation for Future Use, Management Use, Sociocultural Use, Public Use, and Discharged Use.

The Scientific Use category applies to any cultural property determined to be suitable for consideration as the subject of scientific or historical study, including study that would result in its physical alteration. Inclusion in this category signifies that the property need not be conserved in the face of an appropriate research or data recovery (mitigation) proposal.

The Conservation for Future Use category is reserved for any unusual cultural resource which, because of scarcity or special significance, has research potential that surpasses the current state of the art; is of singular historical importance, cultural importance, or architectural interest, or comparable reasons; and is not currently appropriate for conservation as the subject of scientific or historical study that would result in its physical alteration. A cultural property or location included in this category is considered worthy of segregation from all other land or resource

uses, including cultural property uses, that would threaten the maintenance of its present condition or setting, as pertinent, and it will remain in this use category until specified provisions developed in the cultural resource management plan are met in the future.

The Management Use category may be applied to any cultural property considered most useful for controlled experimental study that would result in its physical alteration by the BLM or other entities concerned with the management of cultural properties. Expenditure of cultural properties or data may be justified for purposes of obtaining specific information that would ultimately aid in that management of other cultural properties. Experimental studies may be aimed toward a better understanding of the kinds and rates of natural or human caused deterioration, effectiveness of protection measures, and similar lines of inquiry.

The Sociocultural Use category is to be applied to any cultural property that is perceived by a specified social and/or cultural group as having attributes that contribute to maintaining the heritage or existence of that group. This use category signifies that the cultural property is to be managed in a way that takes those attributes into account, as applicable.

The Public Use category may be applied to any cultural property found to be appropriate for consideration as an interpretive exhibit in place, a subject of supervised participation in scientific or historical study, or related education and recreation uses by members of the general public.

The Discharged Use category means either that a cultural property that was previously qualified for assignment to any of the categories defined above no longer possesses that qualifying characteristic for that assignment to an alternative use; or that a cultural property's scientific use potential was so slight that it was exhausted at the same time the property was recorded, and no alternative use is deemed appropriate. Where a cultural property is involved, allocation to Discharged Use also means that records pertaining to the property represent its only remaining importance and that its location no longer presents a management constraint for competing land uses.

Those traditional cultural properties that are at least 50 years old require consideration under the NHPA. The BLM will analyze each proposed action by determining the likelihood of the presence of not only significant cultural properties, but also the potential for or the presence of traditional cultural properties. Potential impacts to traditional cultural properties subject to the NHPA and, therefore, determined eligible for the National Register of Historic Places, will be avoided, or if possible, mitigated.

FISH AND WILDLIFE

CURRENT MANAGEMENT

The Bureau of Land Management (BLM) will maintain and enhance habitat for wildlife. The emphasis for habitat maintenance and development will be placed on present and potential habitat for sensitive, threatened and/or endangered species, nesting waterfowl, game birds, fisheries and crucial big-game winter ranges. The Montana Fish, Wildlife & Parks (MFWP) is responsible for population management (BLM 1988).

Big Game

A variety of big game species, including mule deer, white-tailed deer, elk, and bighorn sheep use public land in the Monument.

Expansion of big game populations into existing but previously unoccupied habitat may occur. The BLM will work with the MFWP, landowners and grazing permit holders to determine management practices if monitoring indicates decreases in range condition in herd expansion areas. These practices may involve reducing grazing animal unit months (AUMs), reducing wildlife populations, or other management options (BLM 1988).

The BLM will maintain a diversity of forbs, grasses and shrubs on antelope range through proper livestock stocking rates and grazing methods. The BLM will use grazing methods to enhance bighorn sheep habitat and allow their expansion in the Missouri Breaks. Domestic sheep will not be allowed in areas occupied by bighorn sheep, or in adjacent allotments (BLM 1988 and BLM 1994).

The BLM will improve the quality and quantity of summer forage. This will include improving the reproduction and availability of palatable forbs for deer and antelope; maintaining and/or improving deer and antelope winter range (especially woody species) and fawning cover; and maintaining existing sagebrush stands at a canopy cover of 15 to 50% with an effective height over 12 inches (BLM 1994).

Numerous tanks would be placed in allotments to facilitate livestock watering. All the tanks would have bird escape ramps installed to reduce the possibility of birds and small mammals drowning. Proposed winter water tanks would be located away from the private land so it would be expected that elk may begin to use the public land more and depredation on croplands could be reduced (BLM 1998).

Livestock water developments will not be built on the terminal portions of finger ridges in the Missouri Breaks if analysis identifies deer/livestock competition (BLM 1988).

The BLM would plant lure crops on public land where determined to be necessary and feasible to draw elk from private cropland where depredation conflicts are occurring. Planting lure crops

would be considered for small areas, and management to protect lure crops could include fencing, grazing methods, or a change in season of use for livestock. Planting and maintenance of lure crops would be most feasible under a cooperative arrangement with MFWP, other organizations, or individuals (BLM 1994).

Waterfowl

Habitat enhancements (islands, nesting platforms) will be constructed on new or existing reservoirs, ponds, potholes, or river systems where feasible. Easements on or across public land for the development of private water sources will carry stipulations to enhance waterfowl habitat. Oil and gas stipulations restrict drilling activities within 500 feet of reservoirs, lakes, and ponds (BLM 1988).

The BLM may fence specific existing and new waterfowl and fishing reservoirs to establish or protect shoreline vegetation for a perimeter of a minimum of 1000 feet around the high waterline. Periodic, short-term grazing of fenced enclosures may be allowed, if necessary, to maintain or improve wetland habitat (BLM 1994).

Upland Game

The BLM will minimize or prevent road and trail development on sharp-tailed grouse habitat areas. Oil and gas stipulations restrict drilling within 500 feet of known leks and provide for special care in avoiding nesting areas between March 1 and June 30 (BLM 1988).

Livestock grazing methods (which may include the termination of season grazing by October 31) will be used to maintain sagebrush stands with 15-50% canopy cover and 15 inches in height within 2 miles of sage grouse leks (BLM 1988).

The BLM will improve the quality and quantity of nesting, brood rearing and winter habitat for upland game birds. The BLM will provide residual grass and forb cover for upland bird and waterfowl nesting. Objectives for residual cover will be developed in allotment management plans (AMPs) and measured in terms of percent of residual (utilization levels) or visual observation rating. The BLM will manage for succulent vegetation, including a variety of forbs, and maintain big and silver sage on sage grouse wintering and nesting areas with a canopy cover (line intercept) of 15 to 50% and an effective height of 12 inches. The BLM will improve or maintain woody vegetation for sharp-tailed grouse (BLM 1994).

Construction of new water developments within one-half mile of a sharp-tailed grouse lek will only be allowed after careful consideration of potential impacts on woody vegetation due to possible increased livestock grazing. Land treatments will be designed to maintain sagebrush levels with the desired canopy cover range (15-50%) and to increase the amount of succulent forbs. Controlled burning in conifer and sagebrush types will be done on an individual basis to improve wildlife habitat (BLM 1994).

Raptors

Raptor nest sites will be protected. No designated camping or other recreational development will occur within a 1,000-foot buffer zone around raptor nest sites (BLM 1993).

Great Blue Heron and Cormorant

Identified great blue heron and cormorant rookeries on public land will be protected from roads, campsite developments, timber cutting and other intrusions. No disturbance will be allowed within 1,000 feet of rookeries from the start of nesting through the fledging of young birds (BLM 1988 and BLM 1994).

Paddlefish

Underwater rights-of-way crossing the Missouri River will be constructed between June 15 and August 15 to protect spawning paddlefish. Other mitigation to protect spawning paddlefish will be applied as necessary (BLM 1988).

Threatened and Endangered Species

The BLM will work with the U.S. Fish and Wildlife Service (USFWS) to recover threatened and endangered species, including reintroduction efforts. The species of interest are the bald eagle, black-footed ferret, and piping plover.

An intensive inventory of wildlife and wildlife habitat for game, nongame, and threatened and endangered species will be conducted in the river area for the development of a wildlife habitat management plan.

Determination of endangered or threatened plants and animals will be by one or a combination of the following factors:

- The present or threatened destruction, modification or curtailment of a species' habitat or range.
- Over-utilization of a species for commercial, sporting, scientific or educational purposes.
- Disease or predation of the species.
- The inadequacy of existing regulatory mechanisms.
- Other natural or human caused factors affecting a species' continued existence.

No action will be initiated on BLM-administered lands that will jeopardize any federally listed threatened and endangered plant or animal. Influence to other sensitive species and State-designated species of special interest will be evaluated and applicable mitigation developed prior to the initiation of any action on public lands (BLM 1988).

Oil and gas stipulations indicate no drilling could occur within 100 feet of black-tailed prairie dog towns, thereby minimizing loss of potential ferret habitat (BLM 1988).

No black-footed ferrets have been sighted in the Monument. Small prairie dog towns occur throughout the Monument, but they are not suitable ferret habitat. These towns will be managed for the other sensitive species associated with prairie dog towns (BLM 1994).

Black-tailed Prairie Dog

Prairie dog towns smaller than 10 acres will not be actively managed (BLM 1988). Prairie dog control programs will be undertaken only where prairie dogs are shown to cause significant damage to other resources and where damage to threatened and endangered species will not take place (BLM 1993).

When poisoning is scheduled on a prairie dog town that includes State and private land, a cooperative effort would be made to control the entire town. The cost of poisoning for State and private land would be the responsibility of the private landowner or the State land permittee (BLM 1994).

Fishes

Consistent with the 10-year cooperative Fish Management Plan between the BLM and MFWP, the MFWP will be requested to stock the following reservoirs with fish: Butch, Sundance, and Gazob. In the future, other reservoirs may be identified for fisheries management. Priority consideration will be given to reservoirs near communities. Consideration of fisheries potential will be given during the design phase of new reservoirs (BLM 1988).

Oil and gas stipulations provide for no activity within 500 feet of a known fishery (BLM 1988).

As reservoirs are planned during the development of AMPs or habitat management plans, fisheries potential will be a key consideration in location and design. New fisheries reservoirs will normally be fenced and a livestock watering tank provided below the reservoir. Existing fisheries reservoirs will be fenced to exclude livestock, if necessary, to improve emergent vegetation, shade and/or improve the recreational experience (BLM 1994).

Animal Damage Control

Animal damage control will only be conducted with Monument Manager approval when the animal control measure targets the specific offending animal(s); and health and safety factors are not issues. This direction is consistent with the 2001 Plan of Operations submitted to the BLM by the Montana State Office of the USDA Animal Plant and Health Inspection Service (APHIS) Wildlife Services (APHIS 2001).

Land Exchange Criteria

In general, land exchange criteria include areas with important wildlife which are large enough and suitable for public hunting, fishing and trapping and areas suitable for cooperative management under the Sikes Act.

High priority areas for retention and acquisition will be lands with significant wildlife values as defined below. These areas may be of any size.

- Threatened and endangered species (approved recovery plans will also govern actions on these areas).
  - Black-footed Ferret. Occupied habitat or areas identified through planning for future ferret populations
  - Whooping Crane. Suitable or potential habitat.
  - Bald Eagle. Historical nest sites with remaining potential, present nest sites, or documented roosting or wintering areas.

- Fisheries.
  - Access to or larger area adjacent to Class 1, 2, or 3 streams and lake and pond fisheries.
  - Stream areas with restoration potential to become Class 1, 2, or 3 streams.
  - Sites to develop additional fisheries, especially near population centers.
  - Sites supporting spawning or nursery areas, which may be temporal in nature but important to downstream fisheries.
  - Land that would enable BLM to acquire needed instream flow reservations.

- Big Game.
  - Important habitat areas such as crucial winter and associated spring/fall transition areas, kidding/fawning/calving/lambing areas, crucial wallow complexes, mineral licks, and security areas.

- Upland Game Birds, Migratory Birds and Waterfowl.
  - Crucial breeding, nesting, resting, roosting, feeding and wintering habitat areas or complexes. These will vary in size, for example, a highly productive one-acre wetland or 100 acres of nesting cover for pheasants.

- Raptors.
  - Existing and potential nesting areas for sensitive species or significant nesting complexes for nonsensitive species.

- Nongame.
  - Crucial habitat complexes.

Oil and Gas Lease Stipulations

Currently, 44 leases totaling 43,177 acres are within the Monument. Twenty-six leases (27,720 acres) have no lease stipulations.

One lease (1,367 acres) has Montana State Office (MSO) 3100-11 lease stipulations attached and specifically states that provisions must be made to protect permitted livestock and wildlife.

Two leases (1,539 acres) have MSO 3100-24 and 3100-28 lease stipulations and state that there must be provisions for protecting wildlife and critical wildlife habitat.

Six leases (4,721 acres) have MT-3109-1 lease stipulations. In reference to endangered or threatened species, it declares that the Federal surface management agency (SMA) is responsible for assuring that the leased land is examined prior to undertaking any surface-disturbing activities to determine effects upon any plant or animal species, listed or proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow use and occupancy that would be in violation of the Endangered Species Act of 1973 by detrimentally affecting endangered or threatened species or their habitats.

After the SMA has been advised of specific proposed surface use or occupancy on the leased lands, and on request of the lessee/operator, the agency will furnish further data on any special areas which may include 500 feet from grouse strutting grounds. Special care to avoid nesting areas associated with strutting grounds will be necessary during the period from March 1 to June 30 and one-fourth mile from identified essential habitat of State and Federal sensitive species; crucial wildlife winter ranges during the period from December 1 to May 15; and in elk calving areas during the period from May 1 to June 30.

The remaining nine leases (7,827 acres) have standard stipulations. After the SMA has been advised of specific proposed surface use or occupancy on the leased lands, and on request of the lessee/operator, the agency will furnish further data on any special areas which may include 500 feet from grouse strutting grounds. Special care to avoid nesting areas associated with strutting grounds will be necessary during the period from March 1 to June 30 and one-fourth mile from identified essential habitat of State and Federal sensitive species; crucial wildlife winter ranges during the period from December 1 to May 15; and in elk calving areas during the period from May 1 to June 30.

The SMA is responsible for assuring that the leased land is examined prior to undertaking any surface-disturbing activities to determine effects upon any plant or animal species, listed or proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow use and occupancy that would be in violation of the Endangered Species Act of 1973 by detrimentally affecting endangered or threatened species or their habitats.

The lessee/operator may, unless notified by the authorized officer of the SMA that the examination is not necessary, conduct the examination on the leased lands at his discretion and cost. This examination must be done by or under the supervision of a qualified resource specialist approved by the SMA. An acceptable report must be provided to the SMA identifying the anticipated effects of the proposed action on endangered or threatened species or their habitats.

Monitoring

The impacts of implementation, as seen through resource monitoring, will be evaluated on a periodic basis. The general purposes of this resource monitoring will be to:

- determine if an action is fulfilling the purpose and need for which it was designed, or if there is a need for modification or termination of an action;
- discover unanticipated and/or unpredictable effects;
- determine if mitigation measures are effective as prescribed;
- ensure that decisions are being implemented as scheduled;
- provide continuing evaluation of consistency with State and local plans and programs; and
- provide for continuing comparison of plan benefits versus costs including social, economic, and environmental. (BLM 1988)

Monitoring is directed at the biotic resource components, using both temporary and permanent studies. The results of these studies can be used to determine responses in habitat condition and trend; food availability, composition, and vigor; changes in cover and habitat effectiveness; and habitat management objectives (BLM 1988).

Some of the methodologies available include: canopy cover transects; browse transects; woody riparian survey and photo plots; habitat condition rating; color-infrared aerial photography; fish, bird, and mammals species composition and population surveys; waterfowl population dynamics; raptor use and mortality from power lines; pellet group transects; and selected threatened and endangered species inventories (BLM 1988).

GEOLOGY

CURRENT MANAGEMENT

Solid Minerals

The following statement is taken from the Proclamation: "All Federal lands and interests in lands within the boundaries of this monument are hereby appropriated and withdrawn from all forms of entry, location, selection, sale, or leasing or other disposition under the public land laws, including but not limited to withdrawal from location, entry, and patent under the mining laws, and from disposition under all laws relating to mineral and geothermal leasing, other than by exchange that furthers the protective purposes of the monument. The establishment of this monument is subject to valid existing rights."

State Director's Interim Guidance (BLM 2001)

The Proclamation reserved and appropriated all Federal lands and interests in lands within the Monument and withdrew them from all forms of entry, location, selection, sale, leasing, or other disposition under the public land laws, including the mineral leasing and mining laws. No new mining claims can be located, and no new prospecting or exploration activities can be undertaken to identify locatable minerals or to establish the discovery of valuable mineral deposits. Plans of operation for mining operations will be not approved, unless the Department of the Interior has determined the validity of the mining claims and mill sites covered by the Plan of Operations.

Saleable and Locatable Mineral Resources

There are no active mines in the Monument for Saleable (sand and gravel) or Locatable Minerals (precious metals or gems). The area is closed to disposal of mineral materials by regulation (43 CFR 3601.12(a)).

Currently, 63 mining claims for precious gems are located in the Monument. Under current management a Plan of Operations would have to be filed with the Lewistown Field Office before any surface disturbance could be conducted on these claims (43CFR part 3809.11(7)). The first step in the process of responding to the Plan of Operations is a validity determination on the mining claim(s) involved. Each claim must have a discovery of a valuable mineral prior to the date of the withdrawal to be considered a valid existing right. In the event that determination is made, the Plan of Operations would be processed under the existing 3809 or 3802 (for Wilderness Study Areas) regulations. The Proclamation does not direct BLM to initiate validity determinations on the claims. Under existing policy for withdrawn lands, the claimant can continue to hold the claim by payment of annual fees in lieu of assessment or relinquish the claims. Unless the claimant initiates the process by either filing a Plan of Operations or an application for patent, no action will be taken by BLM on the claims unless it is in the public interest to do so (BLM Manual 3060.12A).

Saleable Minerals are covered by regulations at 43 CFR part 3600. Permits and contracts are only issued at the discretion of the authorized officer. There are no active permits on Federal lands in the Monument, and therefore no valid existing rights. The Proclamation closed all Federal lands to mineral materials disposal in the future.

PALEONTOLOGY

CURRENT MANAGEMENT

All Federal lands are closed to commercial collecting under existing policy and regulation (BLM Manual 8270). Paleontological Resources Use Permits are issued to accredited institutions to conduct activity on Federal lands to insure that the resource is used for public display and education purposes only. A plesiosaur specimen was collected by the Museum of the Rockies in 2000 and several microsites were sampled by the University of Chicago in 1999. Dr. Raymond Rogers did his Ph.D. thesis work on the Judith River Formation, in the Upper Missouri Wild and Scenic River, and is currently permitted to conduct further work in the area through Macalester College where he is chairman of the Department of Geology. BLM manual 8270.07.A. states that BLM records of Paleontological locality information are non-public information and exempt from FOIA. Both the Museum of the Rockies in Bozeman, Montana and the Science Museum of Minnesota in St. Paul, Minnesota are authorized to conduct surveys and limited surface collection in the Monument area.

State Director's Interim Guidance (BLM 2001)

Scientific use allows for survey/reconnaissance or limited excavation work with a minimum amount of surface disturbance, as long as such work is conducted under a paleontological permit, and maintains the values for which the Monument was established. No collection of any specimens for commercial purposes will be permitted. The collection of common invertebrate fossils and petrified wood will be allowed for personal use where consistent with preservation goals of the Monument, and as limited by the BLM's Code of Federal Regulation.

SOIL

CURRENT MANAGEMENT

The Bureau of Land Management (BLM) will maintain and/or improve soil productivity by increasing vegetation cover and reducing erosion.

Prior to authorizing any surface disturbing activity (including but not limited to range improvements, natural gas development or right-of-way location), the BLM will evaluate the activity and, if necessary, apply mitigating measures, deny the authorization, or relocate the activity to a more suitable soil type. Site-specific measures will be developed for soils with high erosion susceptibility, steep slopes, sparse vegetation, and shallow soil depth. Activity plans will include mitigation to protect ground cover and streambank stability and to reduce sediment yields from surface disturbing activities. All surface disturbing activities are subject to an on-site evaluation to develop mitigation to reduce erosion and soil compaction and improve soil stability and salinity control. These mitigation measures will also prescribe revegetation programs.

Mitigation Measures

Mitigation measures for the listed activities are as follows:

Oil and Gas Seismic Operations

- Conduct operations when the ground is frozen or dry. Limit vehicular travel to slopes of 30% or less and slopes of 20% in highly erodible soils. When the soils become wet due to precipitation or thawing, operations shall cease.

- Vehicles will not be allowed to operate when ruts are created in excess of 2” deep during linear movement.

- Seismic trucks have the possibility of getting stuck in springs, potholes, wet areas, and alkaline soils that are not frozen. These areas will be avoided or worked around.

Range Improvement Projects

- Potential reservoirs and pit sites should be core drilled to determine if gravel lenses are below the structure.

- All proposed range improvements will be designed to limit erosion, saline seeps, salt accumulations (i.e., selenium) and rapid sedimentation.

- Topsoil and suitable subsoil will be identified and stockpiled during all soil excavation activities and will be used to rehabilitate the area when the project is completed.

Exceptions to this may be granted, based on a site-specific evaluation. Disturbed areas will be monitored for noxious plant infestation and control measures will be implemented as needed.

Forestry

- Mechanical thinning/harvesting should be conducted when the ground is dry, frozen, or snow covered.
- Skid trail locations require special considerations for slopes steeper than 15% or greater.
- Slash burning should be done with a cooler controlled fire.
- For south and southwest aspects, light slash should be left on the site as much as possible to minimize water erosion.
- Roads and trails will be built or upgraded with due regard for environmental considerations. Cut-and-fill slopes should be no steeper than 3:1 where feasible. This will promote quick revegetation and soil stabilization and discourage invasion by weeds. The type of terrain (flat to steep) will be a major factor in applying the 3:1 guideline. The intent is to provide a stable seedbed where practical. After access roads are no longer needed, they will be contoured to a natural appearance and seeded. This could apply to any road within the Monument.

Prescribed Fire

- Sites that are limestone parent material on south or southwest aspects should be burned in a mosaic pattern with a cool fire to minimize the potential for water erosion.

VEGETATION – NATIVE PLANTS

CURRENT MANAGEMENT

Decisions affecting the management of vegetation come from the State Director's Interim Guidance (BLM 2001), Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997), the Judith-Valley-Phillips Resource Management Plan (RMP) (BLM 1994), the West HiLine RMP (BLM 1988 and 1992b), and the Upper Missouri National Wild and Scenic River Management Plan Update (BLM 1993).

State Director's Interim Guidance

Vegetation manipulation projects (such as spiking) will be reviewed on a case-by-case basis. There are areas of crested wheatgrass seedings within the Monument that will be managed to native species to restore natural ecological function as funding and priorities allow. Planting non-native plants will only be allowed when native species are not available for emergency protection such as following fires. Non-native species would be limited to those such as cereal grains that do not have long-term viability for the site.

It is not BLM's intent to conduct forest product sales within the Monument. However, vegetative use areas for forest products will be identified at BLM's discretion as long as the resources for which the Monument was established are not adversely impacted.

Judith-Valley-Phillips Resource Management Plan

Sixty percent of vegetation will be allocated to watershed protection and wildlife forage and cover. 40% will be allocated to livestock.

Allotments in predominately fair ecological condition or with fair condition due to poor livestock distribution will have grazing methods applied to periodically defer grazing during critical growth periods.

Surface disturbing activities greater than ¼ acre will require the initiating party to rehabilitate the disturbance. Native species in the site's natural plant community will normally be seeded to re-vegetate all disturbances. Some reclamation may involve introduced species if these species are necessary to stabilize the site.

West HiLine Resource Management Plan

The BLM will maintain or improve soil productivity in the planning area by reducing erosion and increasing vegetation cover.

Surface disturbing activities on floodplains will have riparian objectives and/or mitigation measures written into activity plans to protect ground cover and streambank stability and to reduce sediment yields.

The BLM will improve or maintain vegetative cover, especially on highly erosive soils.

All proposed reservoirs will require a soils and hydrologic evaluation of the site. Reservoir should be designed with a minimum 15-year life expectancy and all proposed reservoirs will be evaluated to determine the need for off-site water facilities.

The BLM will maintain the public lands that are in satisfactory (good or excellent) ecological condition. On public lands with unsatisfactory (fair or poor) ecological condition, BLM will manage according to multiple use objectives based on ecological site potential for specific uses.

Established allocations (for forage to livestock) will be monitored for actual use, utilization, and trends in condition.

All vegetation increases will be allocated to watersheds until soils are stabilized at a satisfactory condition as determined by an interdisciplinary team prior to increasing livestock or wildlife allocations.

Allotments in predominately fair ecological range condition should have grazing methods that defer early use. (April 1-May 15).

Surface disturbance will be successfully revegetated to 90% predisturbance condition.

A minimum rest period of two growing seasons will be required after any major disturbance to vegetation communities. More rest may be required depending on the situation. Major disturbances are defined as mechanical manipulations of rangeland such as seeding, chiseling, and fire.

Allotment management plans (AMPs) will be developed or revised to include specific objectives for the improvement and maintenance of riparian areas.

Pastures with riparian areas would not be grazed by livestock during the hot season for more than one year out of three in order to maintain or improve riparian areas to satisfactory condition. Riparian pasture outside the UMNWSR Corridor may be grazed during the cool season (May-June 30) to maintain or improve woody vegetation. This stipulation could be altered if monitoring studies indicate impacts would be avoided, or caused, but the management method. As new information on riparian grazing become available, these guidelines may be changed.

The BLM will maintain a diversity of forbs, grasses and shrubs on antelope range through proper livestock stocking rates and grazing methods.

The BLM will use grazing methods to enhance bighorn sheep habitat and allow their expansion in the Missouri Breaks.

Livestock grazing methods will be used to maintain sagebrush stands with 15-50% canopy cover and 15 inches in height within 2 miles of sage grouse leks.

Allotment management plans will be developed with multiple-use objectives to enhance vegetation production; maintain and enhance wildlife habitat; protect watersheds; reduce bare ground to target soil vegetation cover by soil subgroups and to minimize livestock/recreation conflicts. Allotment management plans will implement some form of grazing methods. Grazing management methods will be applied prior to mechanical treatments unless it is clear that grazing management alone will not meet objectives.

Crested wheatgrass seedlings will be managed for maximum livestock production; 70% of production will be allocated to livestock when soils are stabilized to a satisfactory condition. Additional seedings may be used to consolidate existing scattered stands of crested wheatgrass. In addition, new seedling will be allowed on allotments where no other option is available to improve the vegetative condition.

Vegetation manipulations will be planned, developed and implemented to ensure that negative impacts to other resources (wildlife, soils range and watershed) are identified and mitigated. Treatments will be applied if maintenance or improvement cannot be achieved with grazing management practices.

The Ervin Ridge Wild Horse Herd Area would remain free of wild horses.

Prairie dog towns smaller that 10 acres will not be actively managed.

The BLM would manage the area (Cow Creek emphasis area) with a strong emphasis on riparian management. Existing allotment management plans would be revised to incorporate grazing management practices to improve riparian community conditions. Management emphasis would be to discourage or prevent livestock congregation along the bottoms to maintain or enhance riparian vegetation.

Monitoring efforts will focus on vegetation trend, forage utilization, actual use, and climate in "I" category allotments. The data collected from these studies will be used to evaluate current stocking rates, to schedule livestock moves from pasture to pasture, to determine levels of forage competition, and to detect changes in plant communities and to identify patterns of forage use.

The methodology and intensity of study chosen for a particular allotment will be determined by the nature and severity of the resource conflicts present in that allotment.

The Upper Missouri National Wild and Scenic River Plan Update

Allotment management plans will be developed and monitored to enhance vegetation production. Integrated pest management will be utilized to deal with the noxious weed problems. Priority riparian sites will be monitored to provide management strategies to maintain or establish riparian habitat. This may include establishing riparian pastures, temporary or permanent

fencing, specialized grazing methods, developing water in upland areas, placing salt and mineral supplements away from riparian sites, using drift fences and riding (herding) to control livestock distribution and changing season of use.

Monitoring will determine which areas need more intensive management to protect riparian vegetation.

Specific Actions: Allotment management plans will be developed with multiple use objectives to enhance vegetation production, maintain and enhance wildlife habitat, protect watersheds, reduce bare ground to the target soil vegetation cover (see West Hi-line RMP) and to minimize livestock/recreation conflicts.

Monitoring data and analysis will be used to ensure grazing management is reaching the objectives of the AMPs. The monitoring data will be used to allow temporary increases or decreases in AUMs and to revise AMPs.

Existing AMPs will be updated as directed by monitoring or changes in the livestock operation.

The BLM will allocate 100% of the vegetal increases resulting from implementing grazing management methods to watersheds and wildlife habitat protection wherever trend studies indicate unstable soils and/or ground cover of less than 70%.

Management strategies to maintain or establish riparian habitat may include establishing riparian pastures, temporary or permanent river corridor fencing, specialized grazing methods, developing water away in upland areas, placing salt and mineral supplements away from riparian sites, using drift fences and riding (herding) to control livestock distribution and changing the season of use.

Standards for Rangeland Health and Livestock Grazing Guidelines

Implementation of Standards for Rangeland Health was a product of national efforts beginning in 1992 under the title of Rangeland Reform 94 and Healthy Rangelands for all uses. This national EIS provided the initial framework under which Standards for Rangeland Health became part of the regulations for the public land (43 CFR 4180). Having completed the national plan, region specific Standards for Rangeland Health and Guidelines for Livestock grazing were established. The Standards for the area of the Upper Missouri River Breaks National Monument were established in the EIS developed for the Montana State office and specifically for the Lewistown District in cooperation with the Central Montana Resource Advisory Council (RAC).

Standards are physical or biological conditions or functions required for healthy, sustainable rangelands. The purpose of standards is to establish minimum required conditions for public lands within broad geographic areas. They address watershed function; nutrient cycling and energy flow; water quality; air quality; habitat for endangered, threatened, proposed or special status species; and habitat quality for native plant and animal populations and communities.

The following five Standards were established for the Lewistown area (northcentral Montana), which includes the Monument:

#1 Uplands are in proper functioning condition.

#2 Riparian and wetland areas are in proper functioning condition

#3 Water quality meets Montana State Standards.

#4 Air quality meets Montana State Standards.

#5 Habitats are provided to maintain healthy, productive and diverse populations of native plant and animal species, including special status species (federally threatened, endangered, candidate or Montana species of special concern as defined in BLM Manual 6840, Special Status Species Management).

Each of these Standards has a set of indicators that provide clues to the health of an ecological site. These indicators are compared with a set of criteria that have been recognized as healthy and functional within an ecological site. When measures of these indicators fall out side of the desired range, it may indicate that standards of health are not being met.

When a finding of not meeting standards is made BLM has an obligation to take action to correct the situation. (Specifically, where grazing is responsible for not meeting standards, action is required before the next grazing season. 43 CFR 4180.2(c))

Grazing guidelines were established in 43 CFR 4180(f)(2), and regionally refined guidelines were established in the 1997 final EIS for the Montana implementation of Standards.

Within the Monument area, determinations have been made on an allotment basis. Once determinations were documented, implementation was carried out in grouping of allotments or "watershed plans."

Implementation Decisions - Standards for Rangeland Health

Management prescriptions for vegetation and grazing management were identified and implemented in Watershed Plans. These included construction of range improvements and changes to grazing management. The following watershed plans are located in or partially within the Monument boundaries.

- Woodhawk Watershed Plan (1998)
- Two Calf Watershed Plan (1998)
- Armells Watershed Plan (2000)
- Beauchamp Watershed Plan (2001)
- Upper Missouri Watershed Plan (2002)

- Loma/Vimy Ridge Watershed Plan (2002)
- Arrow Creek Watershed Plan (currently being written)
- Bearpaw to Breaks Implementation Plan (currently being written)

VEGETATION – RIPARIAN

CURRENT MANAGEMENT

Legislation, Regulations, and Policies Affecting the Riparian Program

Several major laws, regulations, and policies govern the current riparian program. Below are listed some of the more important laws.

- BLM Manual 7250 – Water Rights
- Classification and Multiple-Use Act
- Clean Water Act
- Executive Order 11988, Floodplain Management
- Executive Order 11990, Wetlands Protection
- Federal Land Policy and Management Act (FLPMA)
- McCarran Amendment, States Water Rights
- National Environmental Policy Act (NEPA)
- Rangeland Reform (Standards and Guidelines)
- Safe Drinking Water Act
- State Director's Interim Guidance
- Water Quality Management on Public Lands
- Water Resources Planning Act
- Water Use Inventory
- Wild and Scenic Rivers Act

Riparian management is currently guided by planning decisions made in the following documents:

- West HiLine Resource Management Plan (BLM 1988 and 1992)
- Judith-Valley-Phillips Resource Management Plan (BLM 1994)

These planning documents are further supplemented and/or amended by the following documents:

- Missouri Breaks Grazing EIS (BLM 1979b)
- Lewistown Noxious Plants EA (BLM 1986d)
- Rangeland Program Summary Update (BLM 1991)

The current management decisions guiding the riparian program for much of the Monument area are contained in the Judith-Valley-Phillips Resource Management Plan. This document states that BLM will maintain and/or improve the riparian-wetland areas based on proper functioning condition and the desired plant community (Standards and Guidelines). The BLM will initially accomplish riparian-wetland objectives through livestock grazing methods at current stocking levels. If grazing methods are not successful in meeting management objectives, the BLM will

take the necessary actions to achieve those objectives. To accomplish these riparian-wetland objectives, the BLM will consider the importance of the intermingled private lands, including valuable riparian-wetland areas, which could be adversely impacted as a result of management changes on BLM land. Riparian-wetland objectives will be developed and implemented through the watershed planning process. To date, the following watershed plans have been completed, or are near completion:

- Woodhawk Watershed Plan (1998)
- Two Calf Watershed Plan (1998)
- Armells Watershed Plan (2000)
- Beauchamp Watershed Plan (2001)
- Upper Missouri Watershed Plan (2002)
- Loma/Vimy Ridge Watershed Plan (2002)
- Arrow Creek Watershed Plan (currently being written)
- Bearpaw to Breaks Implementation Plan (currently being written)

With the completion of the watershed plans listed above, the entire Monument area will be covered under several watershed plans with stated riparian-wetland objectives and methods for achieving those objectives.

Present Demands on Riparian Resources

Multiple use management places several demands on the resources associated with riparian habitat. The three most important demands are flow regulation by upstream dams, dewatering of streams by irrigation, and livestock grazing. A minor, but increasing demand on riparian vegetation is damage caused by campers.

Capability To Meet Present Demands

The ability to influence flow regulation and dewatering of streams is beyond the scope of this document. Grazing administration, however, is within the scope of this document. The various watershed plans contain grazing systems that will allow riparian areas to meet the Standards for Rangeland Health.

VEGETATION – NOXIOUS and INVASIVE PLANTS

CURRENT MANAGEMENT

The management of noxious and invasive plants within the Upper Missouri River Breaks National Monument (UMRBNM) continues as prescribed in the 2001 document "UMRBNM: Guidelines for Integrated Weed Management." This document can be found in Appendix B. Some of the figures from this document are no longer accurate as new information has been obtained on the presence, distribution and management of noxious and invasive plants. The most current data will be found in the Resource Description.

VISUAL RESOURCES

CURRENT MANAGEMENT

The visual resource management (VRM) classes are being implemented under the Judith-Valley-Phillips Resource Management Plan (RMP) and the West HiLine RMP. The VRM class assignments are based on a process that considers scenic quality, sensitivity to changes in the landscape, and distance zone. The four VRM classes are numbered I to IV. The lower the class number the more sensitive and scenic the area. Each class has a management objective which prescribes the level of acceptable change in the landscape.

The VRM class objectives are defined as follows:

- Class I Objective – The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

- Class II Objective – The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.

- Class III Objective – The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

- Class IV Objective – The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance and repeating the basic elements.

Since completion of the Upper Missouri Cultural Resource Management Plan (BLM 1992a), proposed projects along the Missouri River are reviewed to ensure compatibility with preservation of the Bodmer Landscapes. Any projects undertaken within the Monument must have a visual contrast rating worksheet completed as a part of the environmental analysis.

WATER

CURRENT MANAGEMENT

Watershed Resources

Present Demands On Watershed Resources

Multiple use management places several demands on the resources associated with watersheds. The three most important demands are the physical availability of water, the legal availability of water, and maintaining adequate ground cover for watershed protection.

Capability To Meet Present Demands – Watershed Resources

Several shortfalls exist in the physical demand for surface water in the Monument. Suitable reservoir sites are scarce in the area where soil subgroups 3, 4, and 13 dominate due to high siltation rates, erodibility of fill material, and access for heavy equipment. Water savers are an alternative for reservoirs, but are very expensive for the volume of water they provide.

Ground water in much of the area is too deep to be cost effective, although wells with pipelines supplying many tanks may solve localized water shortages. Cost share projects with private parties, government agencies, and wildlife foundations are providing deep wells and extensive pipeline/tank development in some areas. Where ground water is available, lack of power precludes many well sites from being developed. Solar- or gas-powered pumps may provide stock water in some locations.

Each year the legal availability of surface water becomes more tenuous as the State proceeds with adjudication of existing claims. The Bureau of Land Management (BLM) must consider downstream senior water rights claims before developing surface water sources. The BLM's pursuit of reserved water rights on the Judith River and Arrow Creek will be an issue, especially considering the lack of public ownership adjacent to each of those water bodies. The prolonged drought in the Monument area has heightened the awareness of private landowners who are reluctant to grant approval for BLM water projects that may subtract water from their own sources.

No controlled ground water areas exist in the Monument. Legal availability of ground water has not been a problem to date.

An important part of water availability for livestock and wildlife is controlling runoff, erosion, and sedimentation. The soils in the Missouri River breaks area are naturally highly erosive. Reservoirs could remain viable longer if runoff were controlled in the watershed above these sites. Numerous studies have shown that the key to controlling runoff is maintaining adequate ground cover. The multiple use concept of allowing livestock grazing on almost all public land

in the area places demands on this ground cover, especially around water sources, riparian areas, fence lines, shaded areas, and salt blocks.

Watershed Program

Present Demands on the Watershed Program

Several demands are also placed on the Lewistown Field Office's watershed program, including: (1) monitoring water quality and quantity, and riparian and upland health as needed for evaluating existing activity plans, (2) securing water rights, (3) assisting in the planning of water-related projects, and (4) assisting in land use and activity plans.

Legislation, Regulations, and Policies Affecting the Watershed Program

Several major laws, regulations, and policies govern the current watershed program. Listed below are some of the more important laws.

- BLM Manual 7250 – Water Rights
- Classification and Multiple Use Act
- Clean Water Act
- Executive Order 11988, Floodplain Management
- Executive Order 11990, Wetlands Protection
- Federal Land Policy and Management Act (FLPMA)
- McCarran Amendment, States Water Rights
- National Environmental Policy Act (NEPA)
- Rangeland Reform (Standards and Guidelines)
- Safe Drinking Water Act
- State Director's Interim Guidance
- Water Quality Management on Public Lands
- Water Resources Planning Act
- Water Use Inventory
- Wild and Scenic Rivers Act

These and many more laws and regulations guide the management of water resources for the BLM.

Watershed management is currently guided by planning decisions made in the following documents:

- Missouri Breaks Grazing Environmental Impact Statement (1979)
- Prairie Potholes Environmental Impact Statement (1982)
- West HiLine Resource Management Plan (1988 and 1992)
- Judith-Valley-Phillips Resource Management Plan (1994)

The current management decisions guiding the watershed program for much of the Monument area are contained in the Judith-Valley-Phillips Resource Management Plan. This document

states that BLM will maintain and/or improve the riparian-wetland areas based on proper functioning condition and the desired plant community (Standards and Guidelines). The BLM will initially accomplish riparian-wetland objectives through livestock grazing methods at current stocking levels. If grazing methods are not successful in meeting management objectives, the BLM will take the necessary actions to achieve those objectives. To accomplish these riparian-wetland objectives, the BLM will consider the importance of the intermingled private lands, including valuable riparian-wetland areas, which could be adversely impacted as a result of management changes on BLM land. Riparian-wetland objectives will be developed and implemented through the watershed planning process. To date, the following watershed plans have been completed, or are near completion:

- Two Calf Watershed Plan (1998)
- Woodhawk Watershed Plan (1998)
- Armells Watershed Plan (2000)
- Beauchamp Watershed Plan (2001)
- Loma/Vimy Ridge Watershed Plan (2002)
- Upper Missouri Watershed Plan (2002)
- Arrow Creek Watershed Plan (currently being written)
- Bearpaw to Breaks Implementation Plan (currently being written)

With the completion of the watershed plans listed above, the entire Monument area will be covered under several watershed plans with stated riparian-wetland objectives and methods for achieving those objectives.

FOREST RESOURCES

CURRENT MANAGEMENT

The forest types that occur within the Monument in the Judith-Valley-Phillips planning area have not been excluded from harvest of forest products. However, the forested portions referred to as the Missouri River breaks, which includes the Monument, are not part of the productive timber base due to the steep slopes, fragile soil types, poor quality of timber, logging costs, etc. Therefore, this area has not been actively managed for any forest products.

For the forested part of the West HiLine planning area that falls within the Monument, the recreational use of forest products (firewood and Christmas trees) is limited to dead-and-down material only, with no sales (commercial and personal use) occurring within the area described as the Upper Missouri National Wild and Scenic River and the Wilderness Study Areas.

The three-year average for personal use forest products (firewood and Christmas tree permits) within the two planning areas is approximately 191 Christmas trees and 37 firewood permits per year.

Each BLM office establishes areas for personal use forest product sales within the parameters of their respective resource management plans (West HiLine or Judith-Valley-Phillips). Forest product personal use permits oftentimes are issued for non-specific, geographical areas unless a specific product area is identified. Therefore, it is difficult to establish how many, if any, personal use sales have occurred within the Monument over the past years. However, during the past two years no sales of personal use forest products have occurred within the Monument south of the Missouri River.

State Director's Interim Guidance (BLM 2001)

It is not BLM's intent to conduct forest product sales within the Monument. However, vegetative use areas for forest products will be identified at BLM's discretion, as long as the resources for which the Monument was established are not adversely impacted. Also, before these products are lost to prescribed fire or mechanically cleared for fuel reduction, the BLM may consider a forest product sale.

LANDS and REALTY

CURRENT MANAGEMENT

The lands and realty program is guided by various laws, regulations, and instruction memoranda. The primary authorities for granting rights-of-way are the Federal Land Policy and Management Act of 1976 (FLPMA) and the Mineral Leasing Act of 1920 (MLA). The primary authorities for granting leases and permits are Section 302(b) of FLPMA and the Recreation and Public Purposes Act of 1926 (R and PP).

The West HiLine Resource Management Plan (RMP), Judith-Valley-Phillips RMP, and the State Director's Interim Guidance for managing the Upper Missouri River Breaks National Monument (Interim Guidance) guide current management. The Bureau of Land Management (BLM) Handbook 1601-1 (Land Use Planning) states that a resource management plan may identify where and under what circumstances land use authorizations may or may not be granted.

Land Use – Corridors

Beginning in the mid-1970s, conservation organizations, Federal agencies, and the utility industry recognized the need to establish a regional corridor system in the western United States. In 1976, FLPMA introduced the concept of corridor designation and recognition of transportation and utility corridors. The right-of-way (ROW) regulations define designated right-of-way corridors and transportation and utility corridors as follows:

- Designated right-of-way corridor: a parcel of land either linear or areal in character that has been identified by law, by Secretarial Order, through the land use planning process, or by other management decision as being a preferred location for existing and future right-of-way grants and suitable to accommodate more than one type of right-of-way or one or more rights-of-way which are similar, identical or compatible.

- Transportation and utility corridor: a parcel of land, without fixed limits or boundaries, that is being used as the location for one or more transportation or utility rights-of-way.

To develop a corridor system and focus attention on future right-of-way needs, utility companies formed the Western Utility Group (WUG) which has documented much of the present situation involving right-of-way use. The most recent Western Regional Corridor Study (1992) identified corridor networks for the eleven western states; this study has itself been recently updated with information regarding proposed new corridor designations (WO IM #2003-061). One proposed designation would cross the Monument above Coal Banks Landing. The Monument is restricted to the riverbank in this area and there is little, if any, public land that would be impacted.

The BLM's guidance for management of corridor planning is found in the BLM's Land Use Planning Handbook H-1601-1, November 22, 2000, and Instruction Memorandum WO-2002-

196. Together these documents call for the identification of designated corridors and windows, the description of potential windows, avoidance and exclusion areas, and appropriate terms and conditions.

The West HiLine RMP on page 24 states: "The BLM would protect important natural and cultural resources and special management areas by designating those areas as avoidance or exclusion areas for the location of lineal rights-of-way. The…U[pper Missouri National Wild and Scenic River] (River) would be [an] exclusion area." The Missouri River is a major component of the Monument.

The Interim Guidance defers to the West HiLine RMP with regard to right-of-way corridors within the Monument. Areas that are not identified as corridors, windows, avoidance and exclusion areas will remain open for right-of-way use on a case-by-case basis.

Seven transportation and utility corridors (windows) exist within the Monument as identified in the West HiLine RMP for the Upper Missouri National Wild and Scenic River. The remainder of the Wild and Scenic River was identified as an avoidance area for transportation and utility corridors.

- River Mile 0 to 1: State Highway #80 from Fort Benton to Stanford crosses the Monument at its western boundary. The road is located entirely on private land. The Monument only includes the Upper Missouri National Wild and Scenic River at this location, which is bank to bank.

- River Mile 20 to 21: A buried telephone line (M59069) parallels the county road (M78762) that connects Loma with Geraldine. This crosses a small portion of public land in Section 18, T25N R10E.

- River Mile 38.5 to 39.5: A power line is located where the Ferry crosses the Monument at Virgelle. The Monument only includes the riverbank in this location. The county roads and the power line do not encumber public land.

- River Mile 88 to 89: Secondary Highway #236 extends southeast from Big Sandy and across the PN Bridge to Winifred. A power line (M59070) and an underground telephone line (M39347A) are located along this road and cross several miles of public land on the south side of the Monument.

- River Mile 101 to 103: The McClelland/Stafford Ferry road, which connects Chinook, north of the Monument, with Winifred, south of the Monument, has a power line (M24219) that provides power to the Ferry and runs alongside the road on public land on the south side of the Monument.

- River Mile 131.5 to 132.5: The DY Trail leads to the south side of the Missouri River at the location of the old Power Plant Ferry in Fergus County. The Bull Creek/Power Plant Ferry road leads to the abandoned ferry location on the north side

of the Missouri River in Phillips County. No utilities are located on either the north or south side in this area.

- River Mile 148.5 to 149.5: U.S. Highway #191 (M013368) extends from Malta to Lewistown crossing the Monument near its eastern boundary. A power line (M052239) and a buried telephone line (M049342) parallel the highway; both are located on about a mile of public land, east of the highway in this area.

Land Use – Avoidance Areas

Avoidance areas for lineal rights-of-way include the Stafford Wilderness Study Area (WSA), the Ervin Ridge WSA, the portion of the Cow Creek WSA in Blaine County, the Cow Creek Area of Critical Environmental Concern (ACEC), riparian and wetland areas, and areas containing sedimentary breaks soils. Future ROW siting would only be permitted if impacts in these areas can be adequately mitigated.

The scenic and recreational sections of the Upper Missouri National Wild and Scenic River are avoidance areas. New facilities would only be permitted in these segments if the natural, physical and cultural qualities of the river can be maintained.

Land Use – Exclusion Areas

The wild sections of the Upper Missouri National Wild and Scenic River are exclusion areas for ROW siting.

The Woodhawk WSA, Dog Creek WSA, and the portion of the Cow Creek WSA in Phillips County are temporary exclusion areas, pending wilderness area determinations by Congress.

Use Authorizations - Rights-of-Way

The Interim Guidance states: "New applications for rights-of-way or ancillary facilities will be processed pursuant to existing policies and practices, valid existing rights, and as necessary for access to private or state inholdings (e.g. access to explore, develop and produce private and state minerals)."

Access to non-Federal land is also addressed in the Alaska National Interest Lands Conservation Act (ANILCA). ANILCA states that landowners of non-Federal land, which is completely surrounded by public land administered under FLPMA, must be provided such access as is adequate for the reasonable use and enjoyment thereof. The BLM has discretion to evaluate such things as construction methods, alternate routes or even means of access (including aerial) and to establish reasonable terms and conditions necessary to protect the public interest. The landowner must comply with rules and regulations that are applicable with regard to access across public land.

Currently, there are 25 ROWs within the Monument; they consist of roads and highways, electric lines, telephone lines, oil and gas pipelines, a communication site, and water-related facilities

such as dams and ditches (see Lands and Realty Table 1). The ratio of ROW acreage to BLM-administered land is 1% or less, indicating relatively low demand for such use within the Monument.

Lands and Realty Table 1. Rights-of-Way within the Monument

ROW No.	Holder	Type	Acres	Legal Description
M01673	Albert Lind	Irrigation	1.30	T24N R23E, sec. 5
M013368	MT Dept of Transportation	Highway	40.00	T22N R24E, sec. 31
M014191	Bureau of Reclamation	Power Line	5.45	T25N R 9E, sec. 23
M049342	MidRivers Telephone Co-op	Phone Line	1.82	T22N R24E, sec. 31
M73508		Comm Site	.11	T23N R22E, sec. 33
M24219	Fergus Electric Co-op	Power Line	4.64	T22N R18E, sec. 3, 4 T23N R18E, sec. 27, 34
M58077		Power Line	5.36	T22N R17E, sec. 1, 2 T22N R18E, sec. 6, 9
M31621	Havre Pipeline	Oil/Gas Pipeline	6.14	T25N R19E, sec. 15, 27, 28
M34075	Ocean Energy	Oil/Gas Pipeline	4.55	T26N R20E, sec. 4, 9
M39347A	Triangle Telephone Co-op	Phone Line	13.82	T22N R16E, sec. 3, 10, 14, 15
M40972		Phone Line	2.45	T26N R21E, sec. 21, 28
M42864		Phone Line	2.73	T24N R23E, sec. 5, 6 T25N R23E, sec. 31
M59069		Phone Line	1.41	T25N R10E, sec. 18 T25N R11E, sec. 6 T26N R13E, sec. 32
M41268	Klabzuba	Oil/Gas Pipeline	28.85	T23N R18E, sec. 13, 14, 24 T23N R19E, sec. 7, 18, 19, 29, 30
M57527	Big Flat Electric Co-op	Power Line	1.36	T24N R23E, sec. 5, 6
M59070	Hill County Electric Co-op	Power Line	19.02	T25N R11E, sec. 6 T26N R13E, sec. 29 T23N R15E, sec. 30, 31 T22N R16E, sec. 3, 10 T23N R16E, sec. 28 T26N R21E, sec. 17, 21, 28
M60030		Power Line	3.00	T23N R14E, sec. 25
M73490	Hamilton Resources Mgmt	Oil/Gas Pipeline	18.82	T25N R19E, sec. 15, 22-25
M79166		Oil/Gas Pipeline	.73	T26N R20E, sec. 26
M78762	Chouteau County	Road	9.03	T25N R10E, sec. 18
M82369	Express Pipeline	Oil/Gas Pipeline	N/A	T26N R12E, sec. 18
M83688	Faith Drilling	Oil/Gas Pipeline	25.07	T24N R20E, sec. 12 T25N R20E, sec. 1-3, 11, 14, 23, 26, 35 T26N R20E, sec. 35 T25N R21E, sec. 6, 7
M89564	Macum Energy	Oil/Gas Pipeline	2.45	T25N R20E, sec. 4, 10
M91509	Tom Walling	Road	.67	T22N R16E, sec. 12
M91813	Jim and Pat Ayers	Road/Waterline	1.45	T25N R11E, sec. 6

Use Authorizations - Leases and Permits

There are no active leases in the Monument. Permits are limited to film permits, which are restricted to filming from the river or existing roads. Less than a half dozen film permits are issued in a given year.

Withdrawals and Reservations

Bureau of Land Management

The Interim Guidance states that in accordance with the Proclamation, nothing is deemed to revoke any existing withdrawal, reservation or appropriation; the Monument is the dominant reservation.

Upper Missouri National Wild and Scenic River (River)

Management of the River is guided by the West HiLine RMP (BLM 1988) and the Upper Missouri National Wild and Scenic River Plan Update (BLM 1993). The Missouri River is a major component of the Monument, which is the dominant reservation, and therefore, any management decisions must be compatible with protection of the objects for which the Monument was designated.

Power Site Reserve 33 and 757 and Power Site Classification 301

Power site reserves and classifications are managed by BLM as if they were regular public land but subject to the various Federal Energy Regulatory Commission (FERC) authorities. The FERC has jurisdiction over power values. FERC also has the responsibility for making determinations if other uses can be allowed and if the lands can be opened to the operation of the public land laws. The FERC withdrawals are reviewable under DM 603, which has no mandate for completion (refer to WO IM No. 89-370). Power site classification 301 along the Upper Missouri National Wild and Scenic River has been reviewed and recommended for revocation by the former Regional Waterpower Staff located at the BLM Colorado State Office.

U.S. Fish and Wildlife Service

The Charles M. Russell National Wildlife Refuge (CMR) is currently being managed by the U.S. Fish and Wildlife Service (USFWS) under laws and regulations (43 CFR 3101.5) pertaining to wildlife refuges.

Corps of Engineers

The Corps manages lands that are part of the Fort Peck Project. Those lands within the CMR are currently being managed by the USFWS.

Access

A number of public campgrounds along the River are accessible by roads within the Monument. They include: Coal Banks Landing; Judith Landing; Woodhawk Bottom; and the James Kipp Recreation Area. Roads which provide access to the Monument include: Secondary Highway #236 between Big Sandy and Winifred; the McClelland/Stafford Ferry road between Chinook and Winifred; U.S. Highway 191 between Malta and Lewistown; Whiskey Ridge Road; Cow Island Trail; Woodhawk Bottom Trail; Ervin Ridge Road (from the east); the DY Trail to the south side of the River across from the Power Plant area; the Bull Creek/Power Plant Ferry Road on the north side of the River; the Lower and Middle Two Calf Roads; and CMR Refuge Road #209 which connects the James Kipp Recreation Area with Knox Ridge Road; as well as other unnamed roads regularly used by the public.

Land Ownership Adjustment

The Proclamation and Interim Guidance state that "No federal lands within the boundaries of the Monument will be disposed of other than by exchange, which would be done only when necessary to further the protective purposes of the Monument, to block up public land within the Monument, and to enhance the values for which the Monument was designated. Private land or easement acquisitions that enhance the values of the Monument will be considered with willing sellers. Consistent with the [Resource Advisory Council] report to the Secretary (December, 1999) and as funding and priorities allow, the BLM will explore the feasibility of a land exchange program with the Department of Natural Resources and Conservation to divest the state of its interests in the Monument area. Such exchanges would focus on those state lands that would contribute to the objects for which the Monument was designated." The authority for exchanges is Section 206 of FLPMA. Most exchange opportunities involving other than state-owned lands are proposed by outside interests.

Acquisitions

Acquisitions are mainly achieved by exchange, although several parcels of private land along the River were acquired in the past through the Land and Water Conservation Fund (LWCF). LWCF acquisition of private land from willing sellers continues to be a viable management option.

Disposals

No public lands within the Monument will be disposed of prior to finalization of the Monument Resource Management Plan.

LIVESTOCK GRAZING

CURRENT MANAGEMENT

Decisions affecting the management of livestock grazing come from the State Director's Interim Guidance (BLM 2001), Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997), the Judith-Valley-Phillips Resource Management Plan (RMP) (BLM 1994), the West HiLine RMP (BLM 1988 and 1992), the Upper Missouri National Wild and Scenic River Management Plan Update (BLM 1993), and the Missouri Breaks Grazing Environmental Impact Statement (EIS) (BLM 1979b).

State Director's Interim Guidance

Continued livestock grazing is permitted, pursuant to the terms and conditions of existing permits and leases. Guidelines for Livestock Grazing Management practices will be followed to protect rangeland resources, and where necessary, to mitigate any conflicts with other Monument uses and values. Administrative actions will be implemented under existing regulations to assure compliance with existing permit/lease requirements, monitoring and supervision of grazing use, and enforcement actions in response to unauthorized use. Completed watershed plans will be implemented as part of this guidance to meet Standards for Rangeland Health.

Maintenance of existing projects can occur in the same general manner and degree as they have been in the past. Grazing management facilities, included in completed watershed plans and analyzed through the NEPA process, will be implemented as part of this guidance to meet Standards and Guidelines. Other projects will only be constructed where detailed NEPA assessment demonstrates that they would not have an adverse impact on Monument resources protected by the Proclamation.

Standards for Rangeland Health and Guidelines for Livestock Grazing Management

When a finding of not meeting standards is made the BLM has an obligation to take action to correct the situation (Specifically, where grazing is responsible for not meeting standards, action is required before the next grazing season. 43 CFR 4180.2(c))

In the circumstance of grazing, guidelines were established in 43 CFR 4180(f)(2), and regionally refined guidelines were established in the 1997 final EIS for the Montana implementation of Standards.

Judith-Valley-Phillips Resource Management Plan

Allotments in predominantly fair ecological condition or with fair condition due to poor livestock distribution will have grazing methods applied to periodically defer grazing during critical growth periods.

Grazing allocations on newly acquired land will be based on management needs.

A minimum rest period from livestock grazing of two growing seasons will be required after any major vegetation disturbance.

Developed recreational sites will be excluded from livestock grazing, except where necessary to improve the plant community.

Allotment Management Plans (AMPs) will be developed and used to obtain multiple use objectives.

The BLM's allotment categorization system will be used to implement multiple-use objectives.

All vegetation increases resulting from livestock grazing and/or land treatments will be allocated to watersheds in these allotments, until the soil and vegetation resource is stabilized at a satisfactory condition as determined by an interdisciplinary team.

A temporary decrease in livestock forage allocation will be made in the event of temporary loss of forage such in severe drought, fire, or insect or weed infestations.

Forage allocation decisions will be adjusted on an ongoing basis.

Utilization data from key areas that receive substantial use will be used to adjust stock rates.

Fences will be designed for easy passage of wildlife.

Temporary increases in grazing capacity will be made on a nonrenewable basis.

Reduction in grazing made in the Missouri Breaks Grazing EIS will remain in effect.

West HiLine Resource Management Plan

All unallocated parcels will remain available for livestock grazing. An environmental assessment will be prepared before grazing begins for areas not previously grazed by livestock. Grazing allocations on acquired land will be based on management needs and reasons for acquisition. The allocation may range from zero to full capacity and will be made on a yearly basis, or in accordance with a completed activity plan.

All vegetation increases will be allocated to watersheds until soils are stabilized at a satisfactory condition as determined by an interdisciplinary team prior to increasing livestock or wildlife allocations.

Livestock grazing in specialized, high-use recreation sites along the Upper Missouri National Wild and Scenic River (UMNWSR) will be controlled through fencing and/or selective grazing.

Pastures with riparian areas would not be grazed by livestock during the hot season for more than one year out of three in order to maintain or improve riparian areas to satisfactory condition. Riparian pasture outside the UMNWSR may be grazed during the cool season (May-June 30) to maintain or improve woody vegetation. This stipulation could be altered if monitoring studies indicate impacts would be avoided, or caused, by the management method. As new information on riparian grazing become available, these guidelines may be changed.

The BLM will maintain a diversity of forbs, grasses and shrubs on antelope range through proper livestock stocking rates and grazing methods.

The BLM will use grazing methods to enhance bighorn sheep habitat and allow their expansion in the Missouri Breaks.

Livestock grazing methods will be used to maintain sagebrush stands with 15-50% canopy cover and 15 inches in height within 2 miles of sage grouse leks.

Allotment management plans will be developed with multiple-use objectives to enhance vegetation production; maintain and enhance wildlife habitat; protect watersheds; reduce bare ground to target soil vegetation cover by soil subgroups and to minimize livestock/recreation conflicts. Allotment management plans will implement some form of grazing methods. Grazing management methods will be applied prior to mechanical treatments unless it is clear that grazing management alone will not meet objectives.

Monitoring data and analysis will be used to ensure grazing management is reaching its objectives. The monitoring data and analysis will be used to allow temporary increases or decreases in animal unit months (AUM) and to revise AMPs.

Crested wheatgrass seedlings will be managed for maximum livestock production; 70% of production will be allocated to livestock when soils are stabilized to a satisfactory condition. Additional seedings may be used to consolidate existing scattered stands of crested wheatgrass. In addition, new seedlings will be allowed on allotments where no other option is available to improve the vegetative condition.

Livestock water developments will not be built on the terminal portions of finger ridges in the Missouri Breaks if analysis identifies deer/livestock competition.

No changes in livestock class from cows to domestic sheep will be allowed in the areas occupied by bighorn sheep.

The BLM would manage the area (Cow Creek emphasis area) with a strong emphasis on riparian management. Existing allotment management plans would be revised to incorporate grazing management practices to improve riparian community conditions. Management emphasis would be to discourage or prevent livestock congregation along the bottoms to maintain or enhance riparian vegetation.

Monitoring efforts will focus on vegetation trend, forage utilization, actual use, and climate in "I" category allotments. The data collected from these studies will be used to evaluate current stocking rates; schedule livestock moves from pasture to pasture; determine levels of forage competition; detect changes in plant communities; and identify patterns of forage use.

Upper Missouri National Wild and Scenic River Management Plan Update

Monitoring data and analysis will be used to ensure grazing management is reaching the objectives of the AMPs. The monitoring data will be used to allow temporary increases or decreases in AUMs and to revise AMPs.

Existing AMPs will be updated as directed by monitoring or changes in the livestock operation.

The BLM will allocate 100% of the vegetal increases resulting from implementing grazing management methods to watersheds and wildlife habitat protection wherever trend studies indicate unstable soils and/or ground cover of less than 70%.

Management strategies to maintain or establish riparian habitat may include establishing riparian pastures, temporary or permanent river corridor fencing, specialized grazing methods, developing water away in upland areas, placing salt and mineral supplements away from riparian sites, using drift fences and riding (herding) to control livestock distribution and changing the season of use.

Allotment plans will be developed, monitored and changed as needed to enhance riparian vegetation and reduce visitor/livestock conflicts.

Specific actions: Allotment management plans will be developed or revised to include specific riparian objectives for improving and maintaining riparian sites.

Pastures with riparian areas will not be grazed by livestock during the hot season (July-September) more than one year out of three. As new information on riparian grazing becomes available, these guidelines may change.

Livestock grazing in recreation areas will be controlled by fencing and/or selective grazing.

Missouri Breaks Grazing Environmental Impact Statement

This EIS analyzed the impacts of grazing on 2.2 million acres of public land in the Missouri Breaks and outlying areas. The planning area included portions of Chouteau, Blaine, Phillips Judith Basin, Fergus, Petroleum, Garfield, Valley, and McCone Counties. The EIS analyzed grazing capacity and made recommendation for site-specific management of allotments and range improvements in the Missouri Breaks including allotments within the Monument. Decisions were made on an allotment-by-allotment basis; however, several management decisions were specifically recommended in the EIS. These decisions are listed below.

Upper Missouri National Wild and Scenic River

One hundred percent of the vegetative increases resulting from implementation of grazing management systems will be allocated to watershed protection wherever trend studies indicate unstable soils and/or ground cover of less than 70%.

Exclusion of livestock and big game will be made on selected study sites to analyze the effects of trampling and browsing on young cottonwoods.

In the segments of the Missouri River that are classified as recreation or scenic, livestock facilities will be restricted by the objectives established in visual resource Class II. This provides that changes caused by management activity should not be evident in the characteristic landscape.

The wild segments of the river are in visual resource management Class I, which provides primarily for natural ecological changes. In accordance with this and subject to valid existing rights, stringent stipulations to protect the visual resources within the "seen" areas shall be attached to licenses or permits issued. New range improvements would be compatible with the wild character of the river segment subject to valid existing rights. Where range improvements are found to be detracting from the values to be preserved, cooperative efforts will be undertaken with the range user to bring such improvements into conformance with river way objectives.

Management of Allotments Adjacent to Charles M. Russell National Wildlife Refuge (CMR)

Allotments that adjoin the CMR are licensed by the BLM only for that area lying outside the wildlife refuge boundary, even though pastures may extend into the wildlife refuge. Where control of livestock numbers from adjacent areas is desired, the Fish and Wildlife Service has proposed fencing a segment of the refuge boundary. (Since the writing of this EIS in 1981 many of these areas have been fenced).

Allotment management plans along the CMR would not be implemented without close coordination with the affected livestock operators and the U.S. Fish and Wildlife Service. Where specific resource objectives are compatible on the refuge and adjacent BLM lands, cooperative grazing management would be sought. Where specific resource objectives between the two agencies differ, allotment management plans would be implemented only when it has been determined by BLM that such action will not waste dollars or manpower or foreclose future options for cooperation with the Fish and Wildlife Service. Because of different management philosophies between the two agencies (single purpose emphasis versus multiple use) it may be necessary to physically separate the two jurisdictions in selected areas.

MINERALS - OIL and GAS

CURRENT MANAGEMENT

The Federal oil and gas leases within the Monument are considered to have valid existing rights based upon the Proclamation, wherein it states, "The establishment of this monument is subject to valid existing rights. The Secretary of Interior shall manage development on existing oil and gas leases within the monument, subject to valid existing rights, so as not to create any new impacts that would interfere with the proper care and management of the object protected by this proclamation."

The existing Federal leases located within the Monument were authorized under two resource management planning areas: the Judith-Valley-Phillips (JVP) Resource Management Plan (RMP) and the West HiLine RMP. Federal lands (minerals) within the Monument under the jurisdiction of the BLM were available for oil and gas leasing prior to the inception of the Monument Proclamation unless the land use designations were deemed to be incompatible with the impacts associated with oil and gas exploration. The remaining Federal land (minerals) within the Monument that were not leased when the Monument was established (January 17, 2001) were removed from the possibility of future leasing, because the Proclamation withdrew future mineral leasing within the Monument. When the Proclamation was signed, the Federal unleased acreage was 223,771 acres. Since then, two leases have terminated and the Federal unleased acreage within the Monument grew to 226,771 acres (see Appendix C for more information regarding lease acreages).

The Lewistown District Oil and Gas Environmental Assessment of the BLM Leasing Program (BLM 1982b) was prepared to assure compliance with the National Environmental Policy Act (NEPA) of 1969. That document describes the leasing and permitting process for all lands within the district. The decision reached through this assessment process was to continue issuing leases for all BLM-managed lands where protective standard or special stipulations could be applied to insure that oil and gas activity would not have significant effects on the environment.

State Director's Interim Guidance

Oil and Gas Exploration and Development

Under this interim management plan, monument lands will remain open to continued oil and gas development under existing leases, current lease restrictions and BLM regulations. However, the Proclamation also directs the Secretary to manage development, subject to valid existing rights, so it does not create any new impacts that interfere with the proper care and management of the objects protected by the Proclamation.

The intent of interim management of oil and gas activities is to honor existing leaseholders rights, avoid any significant commitment of resources before the monument RMP is completed, and acquire additional geologic data for preparation of the field development plan. With respect

to oil and gas leases, "valid existing rights" involve rights to explore, develop, and produce within the constraints of the lease terms, laws and regulations. The monument RMP will include a field development plan to allow oil and gas leases with valid existing rights to continue while protecting the resources for which the monument was designated.

Existing well operations and maintenance will continue. This could involve activities that don't require approval under existing oil and gas regulations. The type of activity that may occur include operations to stimulate production, enable production, or test for production capability.

The BLM will use a NEPA analysis to determine the potential impacts of oil and gas operations and mitigation measures to avoid interference with the proper care and management of the objects protected by the monument. If the analysis and documentation indicate that the proposal may have impacts that are not in conformance with the Proclamation or with existing resource management plans, the BLM will work with the applicant to find alternatives or modifications to the proposal that will minimize such impacts through special permit conditions, consistent with the applicant's rights under applicable laws, regulations and stipulations. Minimal impacts to surface resources will be striven for throughout the monument.

The current APD review process will be utilized and will include a 30-day public review of the environmental analysis completed for proposed actions. The BLM will determine if public review periods are necessary for additional well operations (e.g., pipelines, production pits, compressors) that require BLM approval.

Surface construction for new well pads, roads, pipelines and associated facilities will involve the minimum acreage necessary for safe operation in order to mitigate impacts to monument objects. Existing rights-of-way and roads will be used for new operations as much as possible to avoid impacts that interfere with proper care of monument resources. Using existing disturbed areas for well locations will be emphasized. Production facilities will be located at individual well sites or co-located if grouping of production facilities would minimize visual contrasts with monument objects. Gas pipelines will follow existing road corridors if available. All oil and gas operations, including reclamation activities, within the monument will be made a high priority for surface inspections.

Leasing

The Proclamation does not allow new oil and gas leases within the boundaries of the monument.

Seismic Operations

Notices of Intent and/or Sundry Notices will be required for all seismic operations. Any approvals by the BLM will include inventories and mitigative measures to avoid new impacts that interfere with the proper care and management of the objects protected by the Proclamation. Off lease seismic operations or seismic operations on public lands with unleased Federal minerals will only be permitted for the purpose of defining the limits of the Federal lessee's interests. Seismic operations may also be permitted for the purpose of exploring State and Fee oil and gas minerals. Seismic operations planned off of existing roads must demonstrate that

proposed transportation and exploration methods will minimize the potential for creation of new roads or trails.

Federal Oil and Gas Leasing

Leasing of Federal minerals grants to the leaseholder the right to explore and develop oil and gas under the terms of the lease. Leases issued for BLM-managed lands contain stipulations that apply to the exploration and development activity that might be proposed during the lease term. The leasing planning documents stress the importance of existing resources that should be taken into consideration before oil and gas lease activity is permitted. Over the last 36 years of issuing leases within the Monument, eight stipulation forms were used. Many of the early leases (May 1967 through September 1971) contained no stipulations; the majority of the leases issued after July 1972 included stipulations with provisions for wildlife, cultural resources, rough terrain, and threatened and endangered species, should they be present on the lease (see Appendix D for the various stipulation forms used).

Post-Leasing Activity

Within the last 30 years, post-leasing activity in the form of exploratory or developmental well drilling has seen a pattern similar to that of state and private lands in the same area. The Monument area referred to in this discussion of leasing activity can be geographically described as an area starting from a point five miles southwest of the Stafford Ferry extending 31 miles to the northeast by 15 miles wide through the Bullwhacker area and continuing on up to the Chimney Butte/Al's Creek Drainage area.

Minerals Table 1 shows the drilling history within the Monument area. The general trend shows two boom-and-bust cycles, which are typical of the overall history of the oil and gas industry wherever lands have been successfully developed for fluid minerals. The table also shows constant low levels of activity within the planning area during the most recent periods. One unmistakable fact that this table presents is that oil and gas activity is no stranger to the Monument area.

Minerals Table 1. Drilling Statistics – Wells Drilled within the Monument Area

Year	Monument Area	Monument Only		Year	Monument Area	Monument Only
Dec-73	21	18		Dec-90	0	0
Dec-74	35	25		Dec-91	1	0
Dec-75	45	21		Dec-92	0	0
Dec-76	8	3		Dec-93	2	1
Dec-77	3	1		Dec-94	1	0
Dec-78	21	16		Dec-95	1	1
Dec-79	4	2		Dec-96	0	0
Dec-80	2	0		Dec-97	0	0
Dec-81	5	3		Dec-98	2	1
Dec-82	1	0		Dec-99	0	0
Dec-83	4	1		Dec-00	0	0
Dec-84	1	0		Dec-01	0	0
Dec-85	6	1		Dec-02	2	1
Dec-86	3	0				
Dec-87	1	1			**Monument Area**	**Monument Only**
Dec-88	5	3				
Dec-89	0	0		**Total**	**174**	**99**

Wells drilled within the Monument have primarily focused on drilling for gas at depths of less than 2,000 feet. No commercial oil has been discovered within the Monument. The Montana State Board of Oil and Gas Conservation (the Board) regulates spacing for private and State wells within the State of Montana. The BLM regularly attends the Oil and Gas hearings held by the Board to ensure that Federal interests are protected. All wells drilled in Montana conform to a statewide requirement based on depth. Statewide spacing rules for a gas well drilled to any depth consist of 640 acres with a setback requirement of 990 feet. This means that there can only be one gas well per section unless an exception is granted or the well is located within an existing Field where spacing rules have been established.

Historically, the majority of oil and gas exploration activity in the Monument area has been for natural gas. The market conditions for natural gas will dictate future levels of oil and gas activity in the Monument. If demand for natural gas should increase it would be possible to see an increase in drilling. Most of the drilling would involve developmental wells in the existing fields per current spacing.

Currently, within the productive areas of the Monument, spacing for gas wells is set at either 640 acres or 320 acres and, in some cases, spacing is requested to be set at a lower increment because of geology and reservoir engineering information. When the Board designates a field, the spacing requirements are incorporated based on geology and reservoir engineering data that is presented to the board at a public hearing by the operating company. (see Minerals Table 2).

Minerals Table 2. Producing Fields and Well Spacing Rules

Field	County	Product	Spacing	Year Set
Leroy	Blaine and Fergus	Gas	320 Ac.	1975
Sawtooth Mountain	Blaine	Gas	640 Ac.*	1976
Sherard Area	Blaine	Gas	640 Ac.*	1974

*The Montana Board of Oil and Gas Conservation has allowed more wells per 640-acre spacing unit in certain areas where one well would not fully drain 640 acres.

Source: Montana Oil and Gas Annual Review

When an operator proposes to drill a well on a Federal lease, the lease is reviewed by BLM specialists for stipulations that apply. In addition to the lease terms/stipulations, the lessee or operator is required to follow procedures set forth under regulations under Title 43, Code of Federal Regulations (CFR). These regulations contain detailed information on the specific procedures to follow when operating on federal lands from drilling to producing to abandonment. The lessee or operating company selects a drill site based on geophysical interpretation, surface and subsurface geology, and reservoir engineering analysis. All of these factors are used to determine the development potential of a drilling prospect.

Lands that have been extensively drilled supply the most information for evaluation, and subsequently, these are the areas of highest development potential. Without detailed subsurface information, lands generally fall into either moderate or low development potential categories, depending on what information can be inferred from adjacent drilled areas and other data sources such as published reports and maps. Other factors which must be considered before selecting a drilling location are spacing requirements, topography, surface and subsurface hazards, and economic considerations.

Oil and gas activity has continued to occur on the existing leased lands located within the boundaries of the Monument during the interim time while the Monument RMP is being written, as specified in the State Director's Interim Guidance. Such activity that has continued to occur after the Monument Proclamation was signed on January 17, 2001 includes, but is not limited to, drilling, production, well maintenance and well abandonment. Prior to the inception of the Monument, nine wells were proposed to be drilled in and adjacent to the Monument. Following the inception of the Monument, eight of the nine wells were approved to be drilled on May 10, 2002, under the Macum/Klabzuba/Ocean Energy Environmental Assessment (EA) (BLM 2002d). The EA followed accepted and recommended procedures in addition to the guidelines established in the Interim Guidance, and found that there was no significant impact if operations were conducted in conformance with mitigating measures within the EA. Since the approval of the eight wells, two have been drilled.

Geophysical Exploration

The Proclamation places the majority of the Federal minerals in the Monument off limits to further leasing; therefore, off-lease seismic operations or seismic operations on public lands with

unleased Federal minerals will only be permitted for the purpose of defining the limits of the Federal lessee's interests.

Prior to drilling activity within the Monument, geophysical exploration can reasonably be expected depending on the lack or quality of information that exists in a certain area. Notice of Intent to Conduct Geophysical Operations (Form 3150-4, formerly 3045-1) and/or Sundry Notices are required for all seismic operations. Any approval by the BLM will include inventories and mitigative measures to avoid new impacts that interfere with the proper care and management of the objects protected by the Proclamation. Included with the application, the applicant submits a map showing the location and nature of any surface disturbance anticipated along the route to be followed. The BLM will attach written instructions before returning the notice directing how the operations are to be conducted. These would include cultural resource inventory for areas with any surface disturbance, well plugging instructions, wet weather restrictions, avoidance areas, and reseeding requirements. The operator is required to have bond coverage before conducting any activity on the ground.

Upon completing operations and rehabilitation work, the operator is required to file a Notice of Completion of Geophysical Exploration (Form 3150-5, formerly 3045-2) and/or Sundry Notices. The BLM then conducts a compliance inspection before release of the bond. Seismic operations may include drilling and setting off charges in shallow wells (normally less than 100 feet deep), surface charges, thumping with hydraulic weight (also known as vibroseis), walking with portable equipment, flying overhead, or any combination of these. Seismic operations planned off existing roads must demonstrate that proposed transportation and exploration methods will minimize the potential for creation of new roads or trails.

Federal Drilling Permit Process

Once a company decides to drill a Federal well, they can file either a Notice of Staking (NOS) or an application for permit to drill (APD) as outlined in Onshore Order No. 1. The NOS is an outline of what the operator proposes to do, with an attached map and a drill site schematic design. Companies that use this option have the advantage of getting input from the BLM, or surface agency, on what conflicts exist and how to address the necessary mitigation in their permit application before they apply for approval. Once the NOS inspection has been conducted, or if there are no obvious conflicts, the company can submit an APD. This document is the BLM permit (Form 3160-3), and it consists of two main parts. The first part is the 13-point surface use plan, and it describes the surface use associated with constructing the drill site, access road, and any production facilities including planned restoration or reclamation. The second part is the eight-point drilling operation plan which describes the drilling equipment to be used, anticipated subsurface conditions, the precautions involved, and the time frame anticipated. Prior to approving the drilling permit, the BLM is required to post the proposed location, operator, and Agency contact for a period of 30 days to allow input from anyone concerned. The APD or NOS is posted at the Great Falls Field Station's public Bulletin Board and at the surface management agency's public Bulletin Board (i.e., either the Lewistown Field Office, Havre Field Station, or both). The onsite inspection of the drill site is conducted to assess the specific impacts and confirm the accuracy of the plan in the APD. Once this is completed, environmental documentation is prepared, analyzing the impacts of the specific proposal with regard to the

existing environment, and mitigating measures are developed to be attached to the APD as conditions of approval. Within the Monument area, the fluid mineral staff of the Great Falls Field Station directs all oil and gas activities. All drilling permit applications are submitted to that office. The Lewistown Field Office and the Havre Field Station staffs cooperate with Great Falls in this effort.

Drilling Phase

Once the APD is approved, the operator may begin working. At periodic intervals BLM personnel, usually petroleum-engineering technicians, will conduct inspections of the drilling rig and operations to insure compliance with the approved plans in the APD. If at any time the operator wishes to change the approved plans in the APD, a Sundry Notice, (Form 3160-5) must be submitted for review and approval. Verbal approval may be obtained, but must be followed up in writing. Once the well is completed, the operator has 30 days in which to submit copies of logs, a geologic report, and a completion report. Also, within five days of going to a producing status, the operator is required to notify the BLM. An approved APD is valid for a period of one year from the date of issuance, with up to two, six-month extensions. If drilling does not commence within the valid time, the operator must reapply.

Production Phase

After the drilling of a successful well, the operator must begin submitting a monthly Oil and Gas Operations Report (OGOR) (MMS Form 4054). This form keeps the Great Falls office up to date on the status of the operation from the date drilling is concluded until the well is plugged and abandoned. After a well has been completed, future activities involving that well are to be reported to the BLM via a Sundry Notice (Form 3160-5). Many different actions could arise over the life of a well, and it is impossible to list all of them here. Actions that require prior approval are those that were not covered in the APD, such as plugging, completion of multiple zones, deepening, or modifications of the production facilities. Some routine actions which do not involve substantial change, such as acidizing and fracturing, require only subsequent reporting. The Federal Oil and Gas Royalty Management Act (43 CFR part 3160) and the BLM Manual contain more specific information regarding reporting requirements.

The Great Falls Field Station has a defined inspection and enforcement strategy, which delineates the priorities for inspecting all of the producing wells in the District. These inspections are carried out to insure that production operations on Federal and Indian leases comply with existing regulations. The BLM, under an existing cooperative agreement, functions as the field verification agency for the Minerals Management Service, which monitors production for royalty collection purposes.

Leases Held by Production Beyond their Primary Term

Leases in the Monument are either in their primary term or their extended term. Leases are held beyond their primary term as a result of production from a well located on the lease or production allocated to the lease from a unit or Communitization Agreement to which the lease is committed.

Under 43 CFR Part 3160.0-5 – Definitions under Onshore Oil and Gas Operations, "*Paying well* means a well that is capable of producing oil or gas of sufficient value to exceed direct operating costs and the costs for lease rentals or minimum royalty." This means that the well must be capable of generating enough revenue to exceed the ongoing operating costs of the well. In this area and many areas of Northern Montana, operators are producing gas wells with as little as 10 MCFD. Such a widespread practice indicates that these low volume wells are capable of generating enough revenue to offset the operators' ongoing operating expenses. A number of wells within the Monument area have production in excess of 10 MCFD; hence, they fulfill the requirement of a *paying well*.

Costs associated with drilling the well and installing production equipment and flow lines are sunk costs and do not enter the equation of whether or not a well is producing in *paying quantities on a lease basis*. Accounting procedures that require the company to depreciate capital investment costs over the life of the well also do not enter into the calculation of whether a well is producing in *paying quantities on a lease basis*. As long as the well has the potential to generate enough revenue to offset ongoing operating expenses, the well is considered as capable of producing in *paying quantities on a lease basis*. The well may never produce enough gas to pay for the capital invested in drilling and completing the well, but by allowing continued production in *paying quantities*, the operator is given the opportunity to recover a portion of their investment.

Requirements can often be mistaken between *paying quantities on a lease basis* versus *paying quantities on a unit basis.* The main distinction between the two is that paying quantities on a lease basis requires the well to produce commercial volumes that exceed the direct day-to-day operating costs and the costs for lease rentals or minimum royalty; the requirement for paying quantities on a unit basis requires that revenue generated by the well exceed the costs of drilling the well and returning a reasonable profit. If a well was being drilled as a unit well, but it failed to meet the unit paying well determination requirement, the well could not be considered as a unit well and a participating area would not be established. However, a non-paying well for unit purposes could continue to hold the lease beyond the primary term based on *paying quantities on a lease basis*.

The Eagle formation can be very productive and can have reserves in excess of 500 MMCF of gas when the conditions are correct. Eagle formation gas wells have been discovered within the Monument area and one well has produced more than 150 MMCF of gas. The main factor limiting development in this area has been the lack of infrastructure in the form of gas gathering lines. As these lines are extended into the area, more wells will be justified and drilled.

Plugging and Abandonment

When a well is no longer capable of producing in paying quantities or has no other beneficial use, the well is plugged and abandoned. Regulations describing plugging procedures for Federal and Indian wells can be found in 43 CFR 3162.3-2. The BLM is responsible for the protection of Federal minerals regardless of the Surface Management Agency, and therefore reviews all plugging programs on Federal and Indian lands to insure the plugging program is designed to:

- Prevent fluid migration between zones.
- Protect mineral resources from damage.
- Isolate producing zones.
- Restore the surface.

Because every well is different, each plugging program will be unique and must be carefully examined. The operator will submit a Notice of Intent to Abandon (NIA) by Sundry Notice (Form 3160-5) detailing the intended plugging procedures. The authorized officer, usually the petroleum engineer, reviews the NIA for subsurface technical adequacy.

The resource specialist of the agency with jurisdiction over the surface reviews the surface restoration. The requirements for surface restoration that were included in the APD, added to the operator's permit through the NOS process or as APD conditions of approval, are the standard that the surface agency will inspect against before informing the BLM to issue final abandonment approval. This action is usually delayed at least a year after the actual plugging of the well occurs to allow for the reclamation process to occur.

Once all parties agree to the plugging program, the NIA is approved and a copy is returned to the operator. A petroleum-engineering technician from the Great Falls Field Station witnesses the plugging of all Federal wells in the Monument. After the plugging is completed, the operator has 30 days to submit a Subsequent Report of Abandonment (SRA) (Form 3160-5). If a well is drilled as a dry hole, verbal plugging orders may be given over the phone. When this is done, a Sundry Notice Form can be submitted which can serve as both an NIA and SRA. A third Sundry Notice (Form 3160-5) is submitted by the operator once the surface restoration is ready for final inspection. This document is not approved until the surface agency is satisfied that surface restoration is complete, which can take two or more growing seasons after abandonment.

RECREATION

State Director's Interim Guidance (BLM 2001)

The BLM (Bureau of Land Management) will continue providing volunteer hosts at the Fort Benton, Coal Banks, Judith Landing, and Kipp Recreation Areas within the Upper Missouri National Wild and Scenic River (UMNWSR) segment of the Monument. These hosts are necessary to provide for visitor contact and information distribution. The BLM will also continue to employ six to eight seasonal river rangers for river patrols, providing campground maintenance, assisting with visitor education and providing health and safety information.

The Fort Benton Contact Station will provide informational, educational and interpretive products for visitors to the Monument.

The BLM is currently coordinating with the City of Fort Benton and the River and Plains Society on the feasibility of a larger, more complete Interpretive Center in Fort Benton for visitor contact, education, and interpretation of resources for the UMNWSR segment of the Monument. This effort will continue.

Dispersed recreation (camping, hiking, sight seeing, etc.) will continue, consistent with current policies and practices and the Proclamation.

The State of Montana's responsibilities regarding wildlife management, including hunting and fishing, within the Monument are unaffected by the Proclamation.

The University of Montana, through the Rocky Mountain Cooperative Ecosystem Studies Unit (CESU), and in cooperation with the Central Montana Resource Advisory Council (RAC) and its subgroup, is directing an ongoing effort to provide technical assistance and research on recreation visitor use and landowner participation in the management of the UMNWSR segment of the Monument. This information will be used to develop a river visitor management plan, including indicators by which actions may be evaluated and adjustments made.

Special recreation permit (SRP) applications for activities or events outside the river corridor may be considered, if the activity does not impact the resources or values for which the Monument was designated.

On February 13, 2003 the BLM extended the current river outfitter moratorium until completion of the Monument Resource Management Plan (RMP). This will allow the BLM the opportunity to analyze data and allow for public involvement. However, because the RMP will not be completed for a number of years, and the Lewis and Clark Bicentennial is approaching which may create visitation spikes, unforeseen circumstances may arise that require this issue to be re-evaluated. If there is a need to re-visit this decision, the BLM will work with the RAC on how to address river outfitting in a collaborative way that protects the resource and is responsive to the public.

Law enforcement operations will be directed by the Lead Field Office Ranger from the Lewistown Field Office. The BLM will provide uniformed law enforcement patrols of the Monument, including jet boat patrols on the river. The Monument Manager will coordinate with the Lead Field Office Ranger to establish priority areas and frequency of patrols.

The law enforcement program will stress public compliance through education and outreach to develop a sense of public ownership of the national Monument. The BLM will provide reactionary response to resource violations that arise in the Monument as consistent with current law enforcement responsibilities within the Field Office. The Fergus, Chouteau, Blaine, and Phillips County Sheriff's Departments conduct emergency services in the Monument. The BLM assists as requested with available resources. Emergency services are guided by BLM policy and administrative action.

Judith Valley Phillips Resource Management Plan (BLM 1994)

The Judith Valley Phillips RMP addressed four of the six Recreation Management Areas (RMAs) in the Monument: South Phillips, Judith, Judith River, and Nez Perce National Historic Trail.

Recreation Management Areas (RMAs) are administrative sub-units of a Field Office that serve as basic land units for recreation management. RMAs do not follow a legal boundary. They are simply areas delineated for specific recreation management focus. RMAs fall into two categories: Special and Extensive.

A Special Recreation Management Area (SRMA) is an area where a commitment of BLM staffing and funding has been made, within the parameters of multiple-use, to provide opportunities for specific recreation activities and experiences on a sustained yield basis. An Extensive RMA is an area where recreation management is only one of several management objectives and where limited commitment of BLM staffing and funding for recreation is required.

The BLM will maintain and/or enhance the recreational quality of BLM land and resources to ensure enjoyable recreational experiences. The BLM's Recreation 2000 guidance and the Tri-State Recreation plan incorporate the following provisions:

1. Managing visitor services including a permit system, interpretive programs, visitor contact, and efforts to improve the BLM's image with public land users;
2. Maintaining all facilities where the public comes in contact with BLM roads, trails, signs, recreation sites and buildings;
3. Developing partnerships among other agencies, organizations, and private citizens; and
4. Enhancing budget/marketing techniques that showcase the BLM's land management.

Recreation emphasis will be to develop and maintain opportunities for dispersed recreational activities such as hunting, scenic and wildlife viewing and driving for pleasure. Methods to achieve these opportunities include emphasizing public access and the Watchable Wildlife and

Back Country Byways programs. The BLM will support dispersed recreation for the public to support local, regional and national needs. The BLM will not construct undeveloped or developed recreation sites based strictly on local use, unless these sites can be realized through partnerships with other government entities, local service organizations, etc.

The operation and development of recreation facilities supported solely by the BLM will be in nationally and regionally recognized areas and in areas where the BLM has previously made substantial investments. The BLM will encourage and support reasonable recreational initiatives from local and regional groups through partnerships, agreements, challenge cost sharing and volunteer efforts.

The BLM will increase coordination with the Montana tourism industry to market BLM recreational opportunities, particularly with the Charlie Russell and Missouri River Tourism Regions for the State of Montana.

The BLM will use signs, maps and brochures to identify recreation resources for the public.

Recreation sites for fishing will be developed by the BLM when there is an opportunity to share funding with other agencies such as the Montana Fish, Wildlife & Parks (MFWP).

The BLM will not allocate permits or specific use areas for outfitters and guides. All BLM land is available at the discretion of the Monument Manager as long as permittees maintain a special use permit and meet the BLM regulation requirements. Outfitters and other recreation users are required to use weed-free feed on BLM land for their livestock as a part of the integrated weed management program.

A pack in/pack out garbage policy will be implemented throughout the area, except for developed recreation sites where an entrance fee is assessed. The BLM will provide sanitation and maintenance services for all developed recreation sites. Partnerships will be sought to help maintain recreation sites.

South Phillips Special Recreation Management Area

Approximately 2,500 acres of the South Phillips SRMA are located within the Monument in Phillips County. The remainder, and the largest portion, is located east of Highway 191.

The South Phillips SRMA provides hunting, fishing, scenic and wildlife viewing and pleasure driving opportunities.

The Bull Creek/Power Plant Ferry route will be nominated to the Back Country Byways program.

Scenic Overlooks will be considered from which the Antelope Creek and Cow Creek Wilderness Study Areas (WSA) can be seen. Any development would be arranged through partnerships and volunteers.

Efforts will be made to acquire the Kid Curry Hideout for interpretive programs.

Wildlife viewing areas will be considered for waterfowl, mountain plover, burrowing owls, sage grouse and sharptails and may consist of photo blinds, hiking trails and the Watchable Wildlife program.

Judith Extensive Recreation Management Area

This RMA includes public land in Fergus and Chouteau Counties within the Monument. This is an extensive RMA, which provides dispersed and unstructured recreational activities.

Recreation access maps, brochures and signs at key public access points and at undeveloped sites will be available for the public.

The BLM land in this RMA has high rockhounding potential and the BLM will allow and encourage rockhounding opportunities.

This RMA includes the Missouri River Breaks Back Country Byway.

Judith River Special Recreation Management Area

This SRMA provides float boating, hunting, fishing, scenic and wildlife viewing and camping opportunities.

The Judith River was evaluated for Wild and Scenic River status and a 27.1 mile segment has been studied and found eligible but not suitable for wild and scenic river status.

Visual resource values (VRM Class II) will be protected along the Judith River.

Nez Perce National Historic Trail Special Recreation Management Area

A portion of this statewide SRMA is located within the area and the BLM will manage the recreation activities and opportunities associated with this portion of this historical feature.

This National Historic Trail System crosses the Judith RMA and provides several opportunities for interpretation. This key segment begins near Winifred and enters the Upper Missouri National Wild and Scenic River near Cow Island. It also parallels portions of the Missouri River Breaks Back Country Byway.

Scenic and cultural values will be protected on BLM land along this historic trail. An activity plan will be developed to detail the management activities along the trial.

West HiLine Resource Management Plan (BLM 1988 and 1992)

The BLM currently manages the North Missouri Breaks SRMA and the Upper Missouri River SRMA under the management guidance of the West HiLine RMP and the Upper Missouri

National Wild and Scenic River Plan Update. The North Missouri Breaks SRMA includes public land in Chouteau and Blaine Counties within the Monument. The Upper Missouri River SRMA includes the Upper Missouri National Wild and Scenic River and some adjacent public land.

The BLM will maintain the recreational quality of public lands by providing opportunities for fishing, hunting, sightseeing, hiking, snow sports and other outdoor opportunities.

The BLM will maintain and enhance the recreational and visual quality of public lands along river systems in the area.

The BLM will provide recreation access maps and brochures for recreational use of the public lands and to promote better sportsman/landowner relations.

The BLM will strive to improve public access to rivers at road and highway intersections and to acquire lands to enhance recreational opportunities. Other developments may be allowed, based on public demand and BLM recreational studies. Management priority will be on the Missouri River.

Roads, trails and public lands will be signed where necessary and appropriate, to aid people recreating on public lands. Priority will be given to areas of intensive use.

Recreational use studies will be conducted on a continual basis to determine areas of intensive use and future access needs.

A pack in/pack out policy at recreation sites will be implemented.

All acquired lands will be evaluated for wilderness values as part of the lands review process. Acquired areas studied for wilderness will be managed to prevent unnecessary and undue degradation of the land, and when it does not conflict with valid and existing rights, they will be managed to meet the non-impairment standard as well.

Upper Missouri National Wild and Scenic River Management

The Upper Missouri National Wild and Scenic River will be managed to protect and preserve the remarkable scenic, recreational, geological, fish and wildlife, historic, cultural, and other values as directed by Congress in the Wild and Scenic Rivers Act (PL 90-1968) and the amendment for the Upper Missouri (PL 94-486, 1976). The BLM will continue to coordinate its management responsibility for the UMNWSR with the National Park Service's (NPS) Rocky Mountain Regional Office, which oversees all wild and scenic rivers and with the NPS's Mid-west Regional Office in managing the Lewis and Clark National Historic Trail. The BLM will manage the segment of the Lewis and Clark National Historic Trail within the planning area, in a manner that is consistent with the purposes and provisions of Public Law 90-543 (the National Trail Act) as amended by Public Law 95-265 and the comprehensive plan prepared by the NPS in 1982. The BLM will manage the segment of the Nez Perce National Historic Trail within the

planning area in a manner consistent with the purposes and the provisions of Public Law 90-543, as amended by Public Law 99-445 and the comprehensive plan being prepared by the USFS.

The BLM will provide recreational opportunities and visitor services consistent with the Wild and Scenic Rivers Act, as amended. Future developments will mitigate impacts to natural and cultural resources. Mitigation measures will be determined after a site-specific evaluation.

The BLM will re-determine user capacity based on the Limits of Acceptable Change criteria (West HiLine RMP, Appendix 22.10). This process will, with public participation, identify how much environmental change will be acceptable. The character and rate of change due to human factors will be kept within acceptable levels. Parameters to be considered during the review process will include, but not be limited to, vegetation change; amount of bare ground near a campsite; bank-side trails; sanitation problems; litter; and available firewood.

The Fort Benton Visitor Center will be maintained and operated to provide visitors with permits and river information. The Visitor Center will provide interpretive information on the cultural and area natural history under the provisions of Public Law 100-522 October 28, 1988 legislation. The ranger stations at Coal Banks and Judith Landing will provide permits and health and safety information to river users and will be operated from Memorial Day through Thanksgiving weekend annually as finances permit.

Areas will be developed for self-guided interpretive study. These developments may be for geological, historical, cultural, paleontological or natural resources. Prior to developing interpretive sites for cultural resources, the site will be evaluated and criteria developed to minimize potential negative impacts to critical resources. These developments may include interpretive signs and displays that will be consistent with visual resource management objectives. The sites that will be developed are Stafford Ferry, Cow Creek, Evans Bend, Steamboat Point, Little Sandy, and Hole-In-The-Wall. Other sites may be developed if substantial public use occurs, if BLM acquires important land, or major new resource discoveries are made.

Recreational use of islands will not be permitted during deer and waterfowl reproduction (e.g., fawn birthing, nesting and brood rearing) periods. Islands will be closed for use from April 1-June 15.

The BLM will continue to maintain undeveloped sites by clearing brush (maximum ¼-acre) for campsite location, enforcing a ”pack-in/pack-out” policy, and removing trash, as necessary. All undeveloped sites in the Recreational and Scenic Segments of the river will be signed and shown on user maps.

Undeveloped sites may be improved to developed sites in Scenic and Recreational River Segments if one or more of the following criteria are met:

(1) public use of the river or of the existing undeveloped sites increases;

(2) impacts to soil and vegetation become damaging; i.e., heavy use compacts soil and kills vegetation;

(3) sanitation becomes a problem;

(4) additional sites are needed to rest existing campsites; and

(5) better distribution of public use sites is needed.

The BLM will maintain all developed sites. New sites will be established if one or more of the above criteria are met. New capital improvements will be allowed if impacts to cultural and natural resources can be mitigated to an acceptable level. Improvements in the Wild Section will be allowed if the sites can be serviced by existing roads or by river. All improvements will comply with the Wild and Scenic Rivers Act, as amended.

Developed sites in Recreational Sections will be established and managed based on demand and economic feasibility.

The BLM will encourage private sector initiatives in development of river visitor use opportunities. The UMNWSR offers a wide range of visitor opportunities, only some of which can be financed by the BLM. To overcome these limitations, non-governmental entities, either individuals or institutions, can be used to accomplish goals compatible with UMNWSR management objectives. These goals may or may not generate profit or result in permanent facilities in the river corridor.

A wide variety of activities can be generated by private sector initiatives. Livery services for boats or horses, overnight or extended-stay lodging facilities, food/water and other provisions sales to river visitors, and guiding are services traditionally offered in this way. Other opportunities may be for institutions to use the UMNWSR for touring and instructional purposes, for the development of privately funded research and for expanded use of the area in regional promotional activity.

The merits and economic feasibility will be assessed if a need is established for a facility, whether it be BLM or private sector initiative, or a cooperative BLM-private venture. Feasible developments will be managed under the Wild and Scenic Rivers Act, as amended, [the West HiLine] RMP, and the Upper Missouri National Wild and Scenic River Management Plan Update.

The BLM will continue, and may expand, visitor services operations to provide for public health, safety and law enforcement. Search and rescue operations and law enforcement will continue as a cooperative effort between BLM, local and state agencies.

BLM will coordinate with the U.S. Fish and Wildlife Service on bankside recreation use and management within the Charles M. Russell National Wildlife Refuge boundaries, between river miles 139-149.

Both motorized and non-motorized watercraft will be permitted in all river segments. There is a no-wake speed limitation during the primary recreation use season for the wild and scenic river segments. A no-wake speed is defined as the speed whereby there is no whitewater in the wake of the vessel or in created waves immediate to the vessel.

Upper Missouri National Wild and Scenic River Management Plan Update (BLM 1993)

The 1993 Upper Missouri National Wild and Scenic River Management Plan updates and supercedes the original 1978 Upper Missouri Wild and Scenic River Management Plan consistent with the West HiLine RMP.

The management objectives for recreational use are to develop criteria to ensure a safe and quality recreational experience while preserving and protecting the natural resources for which the river was designated. This is to be accomplished through the management of visitor services, assistance, information, and use supervision.

Visitor Services - Safety

The BLM will provide for health and safety at levels appropriate to the risks normally expected when engaged in recreational activities on the Missouri River. BLM will attempt to eliminate or reduce hazards such as dangerous dead limbs and trees in designated recreation areas. BLM will attempt to warn the visitor and identify potential natural hazards such as rattlesnakes, ferry crossings, heat and/or cold exposure, potable water sources, etc. through brochures and personal contact when possible. In case of emergencies, the BLM will assist local authorities in search and rescue missions.

Developed and undeveloped recreation areas will be monitored annually for hazard reduction. In developed recreation areas, hazards such as cottonwood limbs and snags will be designated for hazard reduction by contracting with the private sector.

Warning signs will be maintained at all ferry crossings. This will be a cooperative agreement with the appropriate counties.

Public telephones will be installed at selected locations. Phones will be located near BLM ranger stations to ensure their protection from vandalism. BLM will pursue the installation of public phones with the appropriate phone companies.

Potable water sources for boater will be provided at various locations, approximately two floating days apart. Potable water wells will be maintained at Coal Banks Landing area, Judith Landing and James Kipp Recreation Area. New sources will be developed as needed.

Toilet installations will be coordinated with the Central Montana Health District or other appropriate local health agencies.

Search and Rescue operations are normally the responsibility of the local authorities. However, because BLM personnel may be the most familiar with the area, and BLM equipment may be the most effective and convenient available, full cooperation and support, as needed, will be given to the local authorities. A search and rescue action plan has been developed and implemented to provide direction in this cooperative effort.

No search and rescue mission will be performed with less than two persons.

All BLM watercraft will be equipped with Bureau radio equipment for emergency communication purposes.

All Bureau river personnel will receive basic life saving, emergency medical training, and care and maintenance of watercraft as provided by the US Coast Guard Auxiliary and BLM. All BLM watercraft will be equipped with lifesaving and first aid equipment.

River floaters will be cautioned, through personal contacts and the Floaters Guide, to avoid ferry cables and the dangerous undertow created by ferries.

BLM will inform the publics of hazards, when such hazards are obvious and take whatever appropriate means are necessary to reduce hazards. A "Hazards" brochure will be continued.

Bureau personnel observing unsafe practices or hazardous conditions will discourage such practices or conditions. If legal action is required, it will be initiated through the appropriate law enforcement agencies or BLM special agents.

Visitor Services – Facilities

Facility development will include provisions for the mentally and physically disabled. Within the constraints of the Wild and Scenic Rivers Act, development and maintenance will support limited floating, camping, hunting, fishing and interpretive facilities as well as sanitation facilities to meet public needs and to prevent site deterioration and water pollution.

Enough access for the mentally and physically disabled will be developed at facilities to provide the handicapped a reasonable representation of the river experience. Often times, this may be done with little more than the elimination of barriers. Facilities for the disabled will be considered at Fort Benton Visitor Center, Coal Banks Landing, the Judith Landing Recreation Area and James Kipp Recreation Area.

BLM will coordinate with the Charles M. Russell National Wildlife Refuge (CMR) on locating and managing recreation areas as needed or required on that portion of the UMNWSR within the CMR.

All developed and minimally developed recreation areas/facilities will conform to the constraints of the Wild and Scenic Rivers Act, which established the scope of development within each river classification. Development at these sites may consist of campfire rings or firepans, sanitary facilities at carefully selected locations, potable water facilities, minor brush or rock clearing, bank modification to improve access and fencing where necessary to separate livestock from recreational areas.

Recreation developments will be located in areas which do not direct user pressure toward environmentally sensitive or fragile areas.

Firewood may be supplied by BLM or authorized concessionaires at the more heavily used recreation areas.

Visitor Assistance and Information

In order to protect, preserve and enhance natural and cultural features, BLM will promote understanding, appreciation and enjoyment of the various resources. This will be accomplished with an interpretive program, brochures, signs and by providing on-site personal contacts at locations such as Fort Benton, Coal Banks, Judith Landing, Kipp Recreation Area and on river patrols. The use of personal contact will be utilized during the management season from the weekend before Memorial Day through Thanksgiving Day. Any on-site interpretation with the use of signs will be minimal, unobtrusive and ensure there is no degradation of the area.

BLM personnel will be present at Fort Benton Visitor Center and other launch points as available and necessary, as visitor use increases.

River use will be monitored by river patrols in a non-obtrusive manner. Scheduled river patrols will be conducted so the entire 149 miles of river is routinely patrolled during the primary recreation use season.

The primary recreational use season will be from the weekend before Memorial Day through the weekend following Labor Day. The management season will be from the weekend before Memorial Day through Thanksgiving Day.

Interpretation of natural phenomena and cultural and paleontological features will be accomplished primarily with published information guides or by off-site interpretation. On-site interpretation will be provided in an unobtrusive manner as needed and on a limited basis.

Recreation area designation signs, launch point signs and ferry warning signs will be allowed on federal lands where visible from the Missouri River. Any other signs such as interpretive signs will be unobtrusive and not visible from the river.

BLM will develop opportunities to designate, sign and interpret certain existing trails and roads as components on the Back Country By Way system. Any signs or developments will adhere to VRM restrictions and will not degrade the resources for which the river was designated.

Use Supervision (Visitor Regulations)

Visitor use rules are needed to achieve the objectives stated above and to provide for visitor distribution, understanding and enforcement. Visitors must abide by all laws and regulation of the State of Montana and other applicable federal agencies. Regulations will address all acts prohibited in BLM undeveloped and developed recreation areas as well as acts prohibited on the Wild and Scenic River. Recreation use including, but not limited to boating, camping, hiking, fishing, hunting, recreation areas, Watchable Wildlife Areas and Back Country By Ways will be allowed to the extent that the wild and scenic characteristics of the Missouri River are not degraded. Motorized craft will be allowed on all sections of the river, but will be limited to a no-wake speed and no extended upstream travel in the wild and scenic sections during the primary use season. A "pack in/pack out" policy for all garbage and non-combustible litter will be administered.

Both motorized and non-motorized watercraft will be permitted in all river segments. A no-wake speed limitation, during the primary recreation use season, will be enforced the weekend before Memorial Day to the weekend following Labor Day for the wild and scenic river segments. A cooperative agreement will provide coordination with the MFWP for law enforcement. Faster speeds will be permitted for administrative or emergency purposes. Extended upstream travel will be limited to such purposes during the primary recreation use season. No-wake speed is defined as the speed whereby there is no white water in the track or path of the vessel or in created waves immediate to the vessel (this is normally a speed not to exceed five miles per hour depending on water conditions). These limitations do not apply to the portions of the river designated as recreational.

Human waste disposal, at all locations without sanitary facilities, will be by burial or user supplied portable toilets. Human waste disposal by burial will not be allowed within 150 feet of campsite locations or within 200 feet of a water source.

River users will be encouraged to carry litter bags as part of the necessary equipment to conduct a river float trip. Users will be required to adhere to a "pack in/pack out" policy for all garbage and non-combustible litter. Burial of litter or garbage will be prohibited.

All watercraft users will comply with existing US Coast Guard regulations as they pertain to water safety, personal floatation devices and equipment. Motorized watercraft must be registered with the State of Montana and must have visible registration numbers attached.

Dumping debris or dead animals on BLM administered lands within the corridor will be prohibited.

Firewood will be limited to dead and down fuels. Cutting any standing timber will be prohibited.

Carving initials or defacing natural features in any manner will be prohibited.

Rolling lightly balanced rocks or destruction of geologically fragile features in any manner will be prohibited.

Camping on islands will be discouraged from April 1 to July 31, to protect young wildlife and waterfowl.

Discharging firearms will be prohibited in all recreation sites.

Regulations (such as acts prohibited in developed and undeveloped recreation areas and acts prohibited on Wild and Scenic Rivers) will be posted, as needed, at launch points and recreation areas.

Use Supervision (Special Recreation Permits/Fees)

User numbers, including commercial use, will be determined by the Limits of Acceptable Change process. BLM will charge fees at certain developed recreation areas that have permanent facilities such as roads, toilets, potable water and other facilities needed to accommodate the use intended at the area. There will be a user fee for Special Use Recreation Permits for services making a profit and free use Special Use Recreation Permits will be required for organized nonprofit groups.

BLM will determine user capacity based on the Limits of Acceptable Change (LAC) (Upper Missouri River National Wild and Scenic River Plan Update, Appendix F).

A free use permit will be required for non profit organized groups and Special Recreation Permits, with a fee, will be required for commercial recreational use on the UMNWSR and related land in the corridor (43 CFR 8372.1-1) to prevent damage to public land or water resource values and to prevent social conflicts. A fee for commercial outfitters is required since they are making a profit from public resources. Outfitter and guide services will be managed to meet public needs with the use of LAC.

Organized groups will be requested to obtain a free use permit prior to floating.

Resource Advisory Council and Subgroup Recommendations

The May 6, 2002 RAC and RAC Subgroup recommendations the BLM is currently implementing to support management of the Upper Missouri National Wild and Scenic River are set forth in Appendix E.

TRANSPORTATION

CURRENT MANAGEMENT

State Director's Interim Guidance (BLM 2001)

Established roads will remain open to use as presently authorized. The area will be closed to cross-country, off-road travel from motorized vehicles and mechanized vehicles, including mountain bikes, to reduce inadvertent damage to natural resources, except for emergency (fire, search and rescue, law enforcement) or authorized administrative purposes. Motorized wheeled cross-country travel for lessees and permittees would be limited to the administration of a federal lease or permit. Persons or corporations having a valid permit or lease could perform administrative functions on public lands within the scope of the permit or lease. However, this would not preclude modifying permits or leases to limit motorized wheeled cross-country travel during further site-specific analysis to meet resource management objectives for which the Monument was designated. Some examples of administrative functions include:

a) Gas or electric utilities monitoring a utility corridor for safety conditions or normal maintenance.

b) Accessing a remote communication site for normal maintenance or repair.

c) Livestock permittees building or maintaining fences, delivering salt or supplements, moving livestock, or checking wells or pipelines as part of the implementation of a grazing permit or lease.

Motorized wheeled cross-country travel for the BLM would be limited to official administrative business. Examples of administrative use would be prescribed fire, noxious weed control, revegetation, and surveying. Where possible, agency personnel performing administrative functions would locate a sign or notice in the area they are working to identify for the public the function they are authorized to perform.

The cross-country closure does not apply to non-motorized game carts used during a legal hunting season.

Emergency closures will be initiated prior to completion of the Monument Resource Management Plan (RMP) only if significant resource damage is documented. Final decisions on designated routes for vehicular travel, including mountain bikes, will be established through a transportation plan that will be done in conjunction with the Monument RMP.

The completed watershed plans include travel plans for a portion of the Monument: Two Calf Watershed Plan (1998), Woodhawk Watershed Plan (1998), and Armells Watershed Plan (2000).

FIRE

CURRENT MANAGEMENT

National Wildland Fire Management Policy

- Firefighter and public safety is the first priority in every fire management activity.
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated in the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, State, Tribal, and local interagency coordination and cooperation are essential.
- Standardization of policies and procedures among Federal agencies is an ongoing objective.

Current Resource Management Plans

Bureau of Land Management (BLM) policy requires an approved fire management plan for any fire use or limited suppression response to wild land fire. The Judith-Valley-Phillips Resource Management Plan (RMP) (BLM 1994) contained a limited suppression plan and a maximum acreage figure of 100 acres in the Missouri breaks. Until an approved fire management plan for the Monument is completed, the State Director's Interim Guidance and the Interim Management Policy and Guidelines for Lands Under Wilderness Review (BLM Manual H-8550-1) will provide the fire management guidance for the Monument.

State Director's Interim Guidance (BLM 2001)

Fire will be used to manage fuels to minimize risk to those biological, geological, and historical objects of interest for which the Monument was established. Fire could be a positive influence in much of this area, and restoration of natural fire regimes will be encouraged where practical. However, each occurrence will require special consideration. Obvious concerns focus around structural developments, croplands, livestock and livestock forage needs. Social and political considerations will dictate how each fire occurrence will be managed. Appropriate management responses based on current fire danger, resource availability and predicted weather may also be used to: ensure safety of fire suppression personnel; reduce cost of fire suppression; and provide an opportunity to return fire to its natural place in the ecology of the area. Appropriate management response may also include limiting natural fire occurrences (lightning) to pre-planned barriers and natural fuel breaks. A decision matrix will be developed based on fuel and weather conditions, fire danger, other fire activity and resource availability. This matrix will be

used to determine the appropriate response for each fire occurrence on public land in the Monument.

Wildland Fire Suppression and Rehabilitation

The BLM will suppress fires at minimum cost based on fire fighter and public safety and the benefits and values to be protected, consistent with resource objectives. Where an identified risk to private croplands exists, all wildfires will be suppressed during the hot or dry season. The BLM works in an interagency fashion with rural fire departments and other federal and state fire agencies. The closest available fire suppression resources respond to a fire for initial attack, irrespective of land ownership. The BLM Lewistown Fire Dispatch Center provides interagency dispatch for much of central Montana south of the Missouri River.

Appropriate management responses to wildland fire in the Monument, including Wilderness Study Areas, will include traditional fire line tactics, including the use of natural barriers and hand constructed fire line. The use of earth moving or tillage equipment is prohibited for wildland fire suppression on Federal lands within the Monument, unless waived by the authorized officer. Should earth-moving equipment be authorized for use in the Monument, careful consideration will be given as to how and where it is used, so as to minimize potential impacts from erosion. Staging areas will be placed outside the Monument whenever possible. The application of fire retardant is prohibited within the White Cliffs section of the Monument, and is also prohibited within 300 feet of any perennial water body.

Rehabilitation will be based on careful consideration of resource objectives, area concerns and constraints. Certified weed-free seed and seeding with appropriate native species is required.

Prescribed Fire and other Fuels Management

Prescribed burns will be pursued in the Monument to protect infrastructure or wildlife habitat that would be permanently lost in the event of a catastrophic wildfire. Prescribed fire may be used to achieve desired plant communities and to reduce hazardous fuel loads. The BLM will coordinate fuel management with private landowners, affected interests and other agencies. Land uses are to be monitored and adjusted as necessary after a fire to sustain soils and vegetation. Some prescribed fire management objectives may be achieved by limited fire suppression plans that may be developed as part of the Monument RMP.

Wildland and Prescribed Fire Policy for BLM Wilderness Study Areas

Wildland Fire - Wilderness

Protect wilderness characteristics of land within the National Wilderness Preservation System and in Wilderness Study Areas (WSA). Fire management related activities should preserve the natural character of wilderness areas and avoid unnecessary impairment of a WSA's suitability for preservation as wilderness. The use of heavy equipment during wildland fire suppression and rehabilitation in WSAs should be avoided to protect wilderness characteristics. Priority for placement of fire camps should be outside WSAs. Use of motorized vehicles and mechanical

equipment during mop-up should be minimized. A fire plan developed for any WSA should specify fire management objectives, historic fire occurrence, acceptable suppression techniques, buffer zones, smoke management concerns, anticipated effects on private or other agency inholdings, and on adjacent landowners. Suppression methods may include use of power tools, aircraft, motorboats, and motorized fire-fighting equipment while applying appropriate techniques. Complete a wild fire situation analysis (WFSA) by appropriate fire managers and resource staff for any fire that escapes initial attack or has the potential to remain in the extended attack mode for more than 48 hours.

Prescribed Fire - Wilderness

The use of heavy equipment should be avoided to protect wilderness characteristics. Placement of staging areas and fire camps should be outside WSAs. A prescribed burn plan should specify fire management objectives, historic fire occurrence, the natural role of fire, expected fire behavior, smoke management, effect on private or other agency inholdings, and on adjacent landowners. Use of power tools and motorized equipment would be limited.

WILDERNESS STUDY AREAS

CURRENT MANAGEMENT

The two major laws that affect the wilderness program are the Federal Land Policy and Management Act (PL 94-579) of 1976 and the Wilderness Act (PL 88-577) of 1964. The regulations that directly affect the wilderness program are found under the following CFR headings: 43 CFR 8560 Wilderness Areas and 43 CFR 3802 Exploration & Mining, Wilderness Review Program.

The wilderness program in the Monument is in the transitional stage between wilderness study and Congressional action. Six Wilderness Study Areas (WSAs) were identified. A final suitability study and environmental impact statement (EIS) was completed that recommended wilderness designation for a portion of the Antelope Creek and Cow Creek WSAs. The Secretary of Interior provided preliminary recommendations to the President in October 1991. The President sent his recommendation in October 1993 to Congress, which, in turn, is able to designate any of the WSAs, or portions thereof as wilderness, deny designation, or continue study of the areas. Congress has not acted on any of these recommendations.

A description of the areas inventoried and the recommendations for study and/or wilderness designation can be found in the following documents: Montana Initial Wilderness Inventory (August 1979), Montana Wilderness Inventory (November 1980), and Final Missouri Breaks Wilderness Suitability Study/EIS (December 1987). The WSAs that were studied but not determined suitable for wilderness designation were Dog Creek South, Ervin Ridge, Stafford, and Woodhawk. Wilderness Study Areas Table 1 shows the Montana wilderness recommendations for the six WSAs.

Wilderness Study Areas Table 1. Montana Wilderness Recommendations For WSAs within the Monument

WSA Name	WSA Number	Acres Recommended for Wilderness	Acres Recommended for Non-Wilderness
Antelope Creek	MT-065-266	9,600	2,750
Cow Creek	MT-066-256	21,590	12,460
Dog Creek South	MT-068-244		5,150
Ervin Ridge	MT-068-253		10,200
Stafford	MT-066-250		4,800
Woodhawk	MT-068-246		8,100

Source: Montana Statewide Wilderness Study Report Volume I – Statewide Overview (1991)

WSAs will continue to be managed under BLM Interim Management Policy and Guidelines for Lands Under Wilderness Review (BLM Manual H-8550-1) until Congress acts upon them. BLM will prepare a Wilderness Management Plan for any areas designated as wilderness by

Congress. WSAs not designated as wilderness by Congress will subsequently be managed in accordance with guidance for adjacent BLM land unless otherwise specified.

The wilderness program in the Monument emphasizes monitoring the WSAs and responding to internal and external demands or questions about it. Primary use of the WSAs occurs between April and November each year, and the WSAs are field checked monthly during that timeframe. In addition to monitoring, the BLM Field Offices must determine through the environmental analysis process whether potential actions affect the non-impairment standards of the WSAs. Most of the projects to date that have been analyzed are range improvements such as fences, small pit or retention reservoirs, and noxious weed sprayings.

The possibility exists that natural gas development could occur within the Ervin Ridge WSA under pre-FLPMA leases. Prior to any development, the BLM will assess road and pipeline rights-of-way, infield collection lines, applications for permits to drill, and gas monitoring stations through an environmental review. In addition, the BLM occasionally evaluates seismic testing.

Use in the WSAs is mostly by livestock grazing operators and outdoor enthusiasts, primarily seasonal hunters. Local demand to specifically use the WSAs for wilderness values is only one or two requests per year. Since the WSAs are not marked on recreational access/guide maps, most people are unaware of their locations. However, boundary markers have been installed on key access routes and at locations along cherry stem roads and vehicle ways.

Vehicle use within the WSAs is allowed only on existing roads (including cherry stem) or vehicle ways. Some, but not all, of the allowed access routes are signed showing those roads that can be used. Extensive use of vehicle ways during the fall hunting season has created the greatest impacts on the WSAs.

Unauthorized cross-country travel is found in three of the six WSAs. In the Woodhawk WSA, unauthorized motorized travel has been documented on several closed vehicle ways, some of which are severely eroded from use. The Antelope Creek WSA has many spur ridgeline two-tracks located along its cherry stem roads that are not lengthy, but are unnecessary nonetheless; and the Stafford WSA, which has a boundary road adjacent to the high ridgeline of the river breaks, has several tracks beyond “No Motorized Vehicles” signs of between one and several hundred yards that end on promontories with outstanding views of the Missouri River.

Livestock grazing management is the most common activity occurring within the WSAs and includes activities such as salting, fence repair, and supplemental feedings. Motorized use is allowed on cherry stem roads and vehicle ways for the purpose of administering a grazing lease. However, vehicle use off existing routes does occur when livestock managers inspect projects and locate cattle.

Range improvement projects have been proposed both adjacent to and inside the WSAs. Any developments associated with grazing leases must be authorized by the BLM. The proposed projects are evaluated against factors such as visibility, natural appearance, cumulative impact, and the need for maintenance. The two most difficult to assess are the cumulative impact and

vehicle access for maintenance. When a two-wheel track is established to construct a project, the track tends to be used by recreationists (hunters) and the livestock operator(s). Projects outside but adjacent to the Woodhawk WSA are visible within the unit.

State Director's Interim Guidance (BLM 2001)

Wilderness Study Areas (WSA) will continue to be managed under the "Interim Management Policy for Lands Under Wilderness Review." The Lewistown and Malta Field Offices have approved modified surveillance plans in place that require monthly monitoring from April to November. The non-impairment standards under the Federal Land Policy and Management Act continue to apply to WSAs within the monument. Existing non-impairment standards and practices will be applied to activities to protect WSA values and to assess proposed actions that may affect wilderness values.

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ACRONYMS

AMP	Allotment Management Plan
ANILCA	Alaska National Interest Lands Conservation Act
APD	Application for Permit to Drill
APHIS	Annual Plant and Health Inspection Service
AUM	Animal Unit Month
BCF	Billion Cubic Feet
BLM	Bureau of Land Management
CA	Communitization Agreement
CESU	Cooperative Ecosystem Studies Unit
CFR	Code of Federal Regulations
CMR	Charles M. Russell National Wildlife Refuge
CRP	Conservation Reserve Program
DEQ	Montana Department of Environmental Quality
EIS	Environmental Impact Statement
EO	Executive Order
FLPMA	Federal Land Policy and Management Act
LAC	Limits of Acceptable Change
LWCF	Land and Water Conservation Fund
MFWP	Montana Fish, Wildlife & Parks
MLA	Mineral Leasing Act
MLRA	Major Land Resource Areas
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NIA	Notice of Intent to Abandon
NOS	Notice of Staking
NPS	National Park Service
PL	Public Law
R and PP	Recreation and Public Purposes Act
RAC	Resource Advisory Council
RMA	Resource Management Area
RMP	Resource Management Plan
ROW	Right-of-Way
SAR	Search and Rescue
SMA	Surface Management Agency
SRA	Subsequent Report of Abandonment
SRMA	Special Recreation Management Area
SRP	Special Recreation Permit
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
UMNWSR	Upper Missouri National Wild and Scenic River
USFWS	U.S. Fish and Wildlife Service
VRM	Visual Resource Management
WFSA	Wild Fire Situation Analysis
WSA	Wilderness Study Area
WUG	Western Utility Group

APPENDIX A

Best Management Practices

A. Roads

1. Location

a. Minimize the number of roads constructed in a watershed through comprehensive road planning, recognizing intermingled ownership and foreseeable future uses. Use existing roads where practical.

b. Fit the road to the topography. Locate roads on natural benches and stable soil types to minimize the area of road disturbance.

c. Locate roads on well drained soils and rock formations that tend to dip into the slope. Avoid slide-prone areas characterized by seeps, steep slopes, highly weathered bedrock, clay beds, concave slopes, hummocky topography, and rock layers that dip parallel to the slope.

d. Avoid high erosion hazard sites, such as steep narrow canyons, slide areas, slumps, swamps, wet meadows, or natural drainage channels. Where there is potential for material to enter a stream, obtain approval of the Conservation District and/or the Water Quality Bureau under applicable laws (i.e., 124 permit by BLM or a 310 permit by a private contractor).

e. Locate roads a safe distance from streams when roads are running parallel to stream channels. Provide an adequate streamside management zone in order to catch sediment and prevent its entry in to the stream.

f. Minimize the number of stream crossings.

g. Cross streams at right angles to the main channel if practical.

h. Choose a stable stream crossing site and adjust the road grade to reach the site if possible.

i. Avoid unimproved stream crossings. Where a culvert or bridge is not feasible, locate drive-throughs on a stable, rocky portion of the stream channel.

j. A 124 permit by BLM or a 310 permit by a private contractor (Natural Streambed and Land Preservation Act of 1975) is required before disturbance is allowed within the area between the normal high water mark of perennial streams.

k. Avoid long, sustained, steep road grades. Where unavoidable, establish effective water bars and sediment diversions.

l. Vary road grades to reduce concentrated flow in road drainage ditches and culverts to reduce erosion on cut and fill slopes and road surface.

m. When locating roads, provide access to suitable log landing areas (flatter, well drained) in order to reduce soil disturbance.

2. Design

a. Incorporate preventive action into transportation plans. Minimize disturbance. Use available information to help identify erodible soils, unstable areas, and road surface materials.

b. Plan roads to the minimum standard necessary to accommodate anticipated use and equipment. When using existing roads, avoid reconstruction unless absolutely necessary. The need for higher standard roads can be alleviated through better road use management.

c. Construct cut and fill slopes at stable angles.

d. Use plans that balance cuts and fills or use full bench construction (no fill slope) where stable fill construction is not possible. Haul excess material to a safe disposal site and include these waste areas in soil stabilization planning for the road.

e. Contour and roll road grades for minimal disruption of drainage patterns.

3. Drainage

a. Design water crossing structures at points where it is necessary to cross stream courses. Provide for adequate fish passage, minimum impact on water quality, and at a minimum the 25 year frequency runoff. A 124 permit by BLM or a 310 permit by a private contractor is required for perennial stream crossings.

b. Install culverts to conform to the natural stream bed and slope. Place culverts slightly below normal stream grade to avoid culvert outfall barriers.

c. Design culvert installations to prevent erosion of fill. Compact the fill material to prevent seepage and failure. Armor the inlet and/or outlet with rock or other suitable material where needed.

d. Provide adequate drainage for the road surface. Use outsloped roads, insloped roads with ditches and cross drains or drain dips. Dips should be constructed deep enough into the subgrade that traffic will not obliterate them.

e. Plan ditch gradients steep enough, generally greater than 2%, but less than 8%, to prevent sediment deposition and ditch erosion. Gradient depends on parent material.

f. Design the spacing of road drainage facilities based on geologic type, soil erosion class, and road grade.

g. Where possible, install ditch relief culverts at the gradient of the original ground slope, otherwise anchor downspouts to carry water safely across the fill slope.

h. Skew relief culverts 20 to 30 degrees toward the inflow from the ditch to provide better inlet efficiency.

i. Provide energy dissipators where necessary at the downstream end of ditch relief culverts to reduce the erosion energy of the emerging water.

j. Protect the upstream end of cross drain culverts from plugging with sediment and debris. Prevent downslope movement of sediment by using sediment catch basins, drop inlets, changes in road grade, headwalls, and recessed cut slopes.

k. Install culverts to assure protection from crushing due to traffic. Use 1 foot minimum cover for corrugated metal pipes 15 to 36 inches in diameter, and a cover of one-third diameter for larger corrugated metal pipes.

l. Use corrugated metal pipes with a minimum diameter of 15 inches to avoid plugging.

m. Install road drainage facilities above stream crossings so water may be routed through a streamside management zone before entering a stream.

4. Construction

a. Place debris, overburden, and other waste materials associated with construction activities in a location to avoid entry into streams.

b. Minimize stream channel disturbances and related sediment problems during construction of roads and installation of stream crossing structures. Do not place easily eroded material into live streams. Remove material stockpiled on a floodplain before rising water reaches the stockpile. Locate bypass roads to have minimal disturbance on the stream course. Limit construction activity to specific times to protect beneficial water uses.

c. Minimize earth moving activities when soils appear excessively wet. Do not disturb roadside vegetation more than necessary to maintain slope stability and to serve traffic needs.

d. Clear all vegetative material before constructing the fill portion of the road prism.

e. On potentially erodible fill slopes, windrow slash at the toe of the fill slopes to trap sediment, particularly near stream crossings and on erodible fill slopes. Leave breaks for wildlife passage.

f. Stabilize erodible, exposed soils by seeding, compacting, riprapping, benching, mulching, or other suitable means prior to fall or spring runoff.

g. Keep slope stabilization, erosion and sediment control work as current as possible with road construction.

h. Install drainage structures concurrent with construction of new roads and always prior to fall or spring runoff.

i. Complete or stabilize road sections within the same operating season as construction is started, rather than leave major road sections in a pioneer condition over a winter season.

k. Minimize sediment production from borrow pits and gravel sources through proper location, development, and reclamation.

5. Maintenance

a. Grade road surfaces as often as necessary to maintain a stable running surface and to retain the original surface drainage.

b. Avoid cutting the toe of stable cut slopes when grading roads or pulling ditches.

c. When plowing snow for winter timber harvest, provide breaks in snow berm to allow road drainage.

d. Keep erosion control measures functional through periodic inspection and maintenance.

e. Haul all excess material removed by maintenance operations to safe disposal sites. Apply stabilization measures to these sites to prevent erosion. Avoid side casing material where it will enter a stream or be available to erode directly into a stream.

f. Leave closed roads in a condition that provides adequate drainage without further maintenance.

g. Restrict the use of roads during wet periods and spring breakup period if damage to road drainage features resulting in increased sedimentation is likely to occur.

B. Timber Harvesting and Reforestation

1. Harvest Design

a. Consider the following during development of timber harvest systems:

1) Soil characteristics and erosion hazard identification

2) Rainfall characteristics

3) Topography

4) Plant cover (forest type understory, silvics)

5) Critical components (aspect, water courses, landform, etc.)

6) Silvicultural objectives

7) Existing watershed condition

8) Potential effects of multiple resource management activity on beneficial water uses.

9) Compliance with Montana Water Quality Act, State Water Quality Standards and Public Water Supply Act. Manage community and non-community public water supply watershed to comply with State Water Quality Standards. The Public Water Supply Act (75-6-101-MCA) requires approval of plans and specifications for road and other disturbance from the Water Quality Bureau for activities planned for public water supply watersheds.

b. Leave streamside management zones (SMZs) on both sides of perennial streams and intermittent streams with a well defined channel. This zone provides shading, soil stabilization, and sediment and water filtering effects.

c. Use the logging system that best fits the topography, soil type, and season, while minimizing soil disturbance and economically accomplishing silvicultural objectives. Consider the potential for erosion prior to tractor skidding on slopes greater than 40%.

d. Design and locate skid trails and skidding operations to minimize soil disturbance. The use of designated skid trails is one means of limiting site disturbance and soil compaction.

e. Locate skid trails to avoid concentrating runoff and provide breaks in grade.

f. Locate skid trails and landings away from natural drainage systems and divert runoff to stable areas.

g. Use the economically feasible yarding system which will minimize road densities.

2. Harvesting Activities

a. Avoid falling trees or leaving slash in streams or water bodies.

b. Limb or top trees where debris cannot fall or be dragged into the stream.

c. Ground skidding through any perennial stream is not allowed except by permit from the Conservation District (Natural Streambed and Land Preservation Act of 1975 - 310 permit).

d. Minimize operation of wheeled or tracked equipment within the streamside management zones (SMZ) of stream courses designated for protection. Do not operate equipment on stream banks.

e. End-line logs out of streamside areas when ground skidding systems are employed.

f. Logs will be fully suspended when line skidding across a stream and immediately above streambanks.

g. Remove debris entering any stream concurrently with the yarding operation and before removal of equipment from the project site. Accomplish debris removal so the natural streambed conditions are not disturbed. Leave natural occurring downfall material providing fish habitat.

h. Avoid equipment operation in wetlands, bogs, and wet meadows except on designated roads. Use end-lining and directional falling for harvest operations in these areas.

i. Repair damage to a stream course caused by logging operations, including damage to banks and channel, to as reasonable condition as possible without causing additional damage to the stream channel.

j. Tractor skid when compaction, displacement, and erosion will be minimized.

k. Install necessary water bars on tractor skid trails prior to expected periods of heavy runoff. Appropriate spacing between bars is determined by the soil type and slope of the skid trail. Timely implementation is important.

l. Construct draingate structures on skid trails to prevent water and sediment from being channeled directly into stream courses.

m. Construct water bars and/or seed skid trails and landings, where natural revegetation is inadequate to prevent accelerated erosion, before the next growing season. A light ground cover of slash or straw will help retard erosion.

n. Avoid skidding with the blade lowered.

o. Suspend the head end of the log whenever possible.

p. Minimize the size and number of landings to that necessary for safe, economical operation.

q. Avoid decking logs within the high water mark of any stream.

r. Provide suitable delivery, storage, and disposal for all fuels, shop debris, waste oil, etc.

3. Slash Treatment and Site Preparation

a. Rapid reforestation of harvested areas is encouraged to reestablish protective vegetation.

b. Use brush blades on cats when piling slash. Avoid use of dozers with angle blades. Site preparation equipment producing irregular surfaces are preferred. Care should be taken to avoid severe disruption of the surface soil horizon.

c. Minimize or eliminate elongated exposure of soils up and down the slope during mechanical scarification.

d. Scarify the soil to the extent necessary to meet the reforestation objective of the site. Low slash and small brush should be left to slow surface runoff, return soil nutrients and provide shade for seedlings.

e. Carry out brush piling and scarification when soils are dry enough to minimize compaction and displacement.

f. Carry out scarification on steep slopes in a manner that minimizes erosion. Broadcast burning and/or herbicide application is a preferred means for site preparation on slopes greater than 40%.

g. Maintain an streamside management zone between site preparation or slash disposal areas and streams.

h. Scarify landings and temporary roads on completion of use.

i. Do not apply chemical vegetation control treatment to water bodies. Provide suitable buffer strips between chemical mixing and application areas and all water bodies.

j. Apply pesticide and dispose of containers according to label and Environmental Protection Agency registration directions. Make contingency plans to follow in case of accidental spills. Mixing and disposal of chemicals should be supervised by a licensed applicator.

k. Limit water quality impacts of prescribed fire: construct water bars in firelines; reduce fuel loadings in drainage channels; maintain the streamside management zone; avoid intense fires unless needed to meet silvicultural goals.

C. Fire Suppression

1. Minimize watershed damage from fire suppression by avoiding heavy equipment operation on fragile soils and steep slopes.

2. Stabilize suppression damage where erosion potential has increased. Treatments include installing water bars, seeding, planting, fertilizing, spreading slash or mulch on bare soil, repairing road drainage facilities, and clearing stream channels of debris.

3. Conduct burn area surveys where necessary to assess the need for rehabilitation of watershed damage. Rehabilitation measures may include: seeding, fertilizing, fencing, clearing debris from stream channels, constructing trash racks, channel stabilization structures and debris retention structures.

4. Consider the impacts of sewage disposal when establishing locations for fire camps, logging camps, or other similar facilities.

APPENDIX B

Upper Missouri River Breaks National Monument:

Guidelines for Integrated Weed Management

Bureau of Land Management
Havre Field Station
1704 2nd Street West
Drawer 911
Havre, MT 59501

To the Reader:

This document was developed with the purpose to initiate a coordinated integrated weed management program for the Upper Missouri River Wild and Scenic River Corridor. Soon after the first drafts of this plan were completed, President Clinton designated the area as a National Monument. The BLM decided to expand this plan to include those public lands that are included within the monument boundaries. Keep in mind, however, that the data presented comes from the river corridor prior to the monument designation.

It is our intent that this document would provide a basic strategy for each of the invasive species of concern on the Upper Missouri River as well as infestation sites in commonly used recreation areas managed by BLM. This plan focuses on BLM activities and management, but allows for the BLM to participate in cooperative weed programs with other agencies and interest groups.

Amendments to this plan will be made as needed.

NOTE:
This document uses a category system to classify invasive plants similar to the Montana Noxious Weed List. Although the category definitions are the same for both our document and the Montana Noxious Weed list, the actual lists are not the same. When a plant is referenced with a category number it represents the list specific to the public lands within the National Monument, NOT the Montana Noxious Weed List.

Addressing the concerns and management of invasive plant species is an ever-changing process. The BLM appreciates your interest in the management of these dangerous non-native species.

Please send questions or comments to:

USDI-BLM
Attn: Kenny Keever – UMRBNM Weed Coordinator
Drawer 911
Havre, MT 59501

Or email:
Kenny_Keever@blm.gov

Introduction

The Upper Missouri River Breaks National Monument (UMRBNM) has seen a significant increase in the amount and distribution of noxious weeds and invasive plants along the Missouri River and many of its major tributaries in the past 10 to 15 years. Leafy spurge, Russian and spotted knapweed and Canada thistle have become commonplace along the entire length of river – the same impressive landscape that Lewis and Clark described nearly two centuries ago. More recently, new invaders such as salt cedar, purple loosestrife and perennial pepperweed, have been spotted along river banks and in campgrounds and river bottoms. Clearly, this expansion and invasion of noxious weeds places many of the unique resources found within the monument at risk. Invasive plants interfere with recreation activities and limit future opportunities, they replace distinct and critical wildlife habitat unique to river ecosystems and they compete with riparian plant communities so critical to wildlife and recreation along this stretch of the Missouri River.

> The importance of this area was recognized on January 17, 2001, when President Clinton officially added the Upper Missouri River Breaks National Monument to the Department of Interior's National Landscape Monument System. The monument includes about 375,000 acres of public land bordering the Missouri River from Fort Benton to James Kipp Park. Six wilderness study areas and two national historic trails lie within the monument boundary. The east end of the monument is joined by the Charles M. Russell National Wildlife Refuge covering the last 10 miles of river before reaching James Kipp Recreation Area.

Certainly the core feature of the monument is the Upper Missouri River which winds through the center of the management area. Congress designated this 149 mile stretch as a component of the National Wild and Scenic River System in 1976. This section begins at historic Fort Benton and ends at the Fred Robinson Bridge where U.S. Highway 191 crosses the Missouri River. Both of these designations identify the spectacular diversity of biological, scientific, historic, wildlife, geological and cultural resources located along the Missouri River. Today, all of the unspoiled, natural settings and unique features of this historic treasure are threatened by the introduction and spread of invasive and noxious plant species.

Weed Management Plan

> The purpose of the UMRBNM weed management plan is to provide guidelines for the prevention, containment and eradication of invasive and noxious plants and to coordinate BLM, private and state weed management efforts over the next 10 years. The plan describes the current status of invasive noxious weeds within the monument, past control efforts, and more importantly, recommends a combination of treatment strategies to suppress or eradicate existing invasive plant populations. This plan is based on the goals and strategies outlined in "Partners Against Weeds", an action plan developed by the Bureau of Land Management in 1996 to prevent and control the spread of noxious weeds on public lands.

Conformance with Existing Land Use Plans, NEPA, Legislation

Through various laws, acts and policy, the BLM has the responsibility and authority to control noxious plants on public lands. Two Federal laws specifically address weed control on public land:

1. Federal Noxious Weed Act of 1974, as amended by Sec. 15, 1990
2. Carson-Foley Act of 1968

In addition, state and county laws commonly place responsibility for noxious weed control on public land with the Federal Government.

The decision to implement integrated vegetation treatment programs on public lands administered by the Bureau of Land Management have been analyzed in two separate Environmental Impact Statements (EIS), The Final EIS for Vegetative Treatments in 13 Western States (1991) and the Northwest Area Noxious Weed Control Program FEIS (1985), SEIS (1987). Both documents emphasize the use of an integrated treatment program, a combination of manual, mechanical, biological, prescribed fire and chemicals, to control and eradicate noxious weeds on public lands in an environmentally sound manner.

Furthermore, land use plan guidance for the area also includes the management of noxious weeds. The West Hiline and Judith, Valley, Phillips Resource Management Plans (RMP) state:

The containment/eradication of noxious plants will proceed as analyzed in the Northwest Area Noxious Weed Control EIS and Supplement (1985,1987) and Vegetation Treatment on BLM Lands in 13 Western States EIS (1991).

Similar reference is made to integrated pest management in the Programmatic Environmental Assessment on Containment/Eradication of Selected Noxious Plants in the BLM Lewistown District (1986) and BLM's Noxious Weed Management Plan: Lewistown District (1992).

Further guidance and liberal references are made from the following documents:

The Montana Weed Management Plan, Montana Weed Control Association (January 2001)

Guidelines for Coordinated Management of Noxious Weeds: Development of Weed Management Areas (USDA & USDI, 1999)

Guidelines for Coordinated Management of Noxious Weeds in the Greater Yellowstone Area (USDA & USDI, 1991)

Overview of Existing Conditions

To date, the present level of weed management and control has not been adequate to contain the spread of noxious weeds within the UMRBNM. Currently, 14 noxious weeds infest about 500 acres of public land within the monument. Appendix 1 lists BLM's Invasive Plants and Species of Concern along the Upper Missouri River and also the noxious weeds listed by the State of Montana. The following clearly illustrates the fact that noxious weeds and invasive species have become a major problem on public lands within the Upper Missouri River Breaks National Monument. During 1975 and 1976, when BLM was conducting upland and riparian inventories along the entire Upper Missouri National Wild and Scenic River corridor, no known weed infestations were reported (personal contact, George Hirschenberger, BLM Range Specialist). In 1983, BLM personnel from the Lewistown office treated all weed infestations along the Missouri River from Coal Banks Landing to the Fred Robinson Bridge. Only a total of 20 acres were treated (personal contact, John Fahlgren, BLM Assistant Field Manager). A detailed noxious weed inventory completed during 1999 and 2000 revealed a different picture. Nearly 500 acres of noxious weeds were mapped - just on public land. No information was collected for private or state land, however, it was noted that the problem is just as severe. This represents an increase of 23% per year. Unfortunately for many of these noxious weed species, infestations have reached the level where eradication is no longer possible.

Efforts to control noxious weeds along the river corridor continued through the 1980's and 1990's. In spite of budget constraints and inadequate inventories sites were treated with herbicides, weeds have been hand pulled, prescribed fire has been used to increase the effectiveness of herbicides and enhance the establishment of bio-control agents and bio-control agents have been released to control a wide variety of weed species.

To widen cooperation with other landowners and land management agencies, BLM has entered into cooperative agreements with Fergus, Blaine and Chouteau counties. Also, to a limited extent, BLM has worked cooperatively with private individuals by providing herbicides and equipment to treat noxious weed infestations on public land. Cooperative research efforts have been ongoing with the Agricultural Research Service (ARS) and the Animal, Plant Health Inspection Service (APHIS), and Montana State University to evaluate the establishment of biocontrol agents.

Impacts to Resources

Noxious weeds possess many attributes giving them a competitive advantage over native plants. One advantage is the lack of natural predators and diseases that are usually present in their region of origin. In addition to lacking these checks and balances, most invasive species have one or more of the following attributes that further give them a competitive edge:

- Perennial growth habit
- Ability to grow under adverse conditions
- Continuous seed production
- Ability to reproduce by vegetative roots and stems
- Extended viability of seed in the soil
- Unique adaptations for seed dispersal
- A high degree of genetic variability

Given these advantages, and without adequate control measures, invasive plants have become an increasingly significant part of the landscape within the Upper Missouri River Breaks National Monument. Their invasion is most often permanent impacting native plant communities, wildlife and people. As they spread, they continually degrade the health of the land. They impact all resources and therefore are of great concern. The following information outlines some of the impacts invasive plant species are having on the Upper Missouri River ecosystem.

Weeds Impact Range Management-

Invasive plant species reduce desirable plant production in the areas they infest. In some cases, they can completely eliminate native vegetation allowing only other non-desirable plants to grow. For example, downy brome will invade disturbed soils and areas were plant competition is reduced. If left unchecked, this can cause a reduction in available forage for livestock reducing the carrying capacity of once productive rangelands.

Invasive plant species can also cause health problems for livestock, horses, and other animals. For example, leafy spurge produces a milky latex that is known to be a severe irritant to the eyes, nose, mouth, and throat of cattle. For this reason, cattle will not consume leafy spurge plants or other desirable vegetation in or around the plant.

If nothing is done in a pasture that is infested with weeds, the problem will become increasingly worse. As invasive species continue to spread, the land will support fewer animals for shorter periods of time. Studies have shown that grazing capacities for livestock can be reduced by 65% to 90% due to spotted knapweed infestations (MT Cooperative Extension Service & Montana Weed Control Association).

Weeds Impact Wildlife Habitat & Management-

The variety of vegetation along the Missouri River provides habitat for a diverse wildlife population. More than 60 mammals, 233 species of birds and 20 species of amphibians and reptiles inhabit the area. Noxious weeds reduce wildlife

forage, alter thermal, escape and nesting cover, change water flow and availability to wildlife and may impact territorial space necessary for wildlife survival. Wildlife species that depend on native plants, both in upland areas and river bottoms, often times cannot adapt to "weedy" plant communities. Studies have shown that in wetlands, invasions of purple loosestrife and salt cedar degrade habitat for wildlife species dependent on riparian vegetation (MT Cooperative Extension Service & Montana Weed Control Association).

Cavity nesting birds are seriously impacted from replacement of cottonwoods by Russian olive and salt cedar. Large raptors, such as eagles, are dependent on crowns of large trees for nesting. Where noxious weeds invade the understory of cottonwood groves, shrubs are displaced impacting riparian habitat for songbirds.

Weeds Impact Recreational Uses-

The Upper Missouri is known for its scenic value creating outstanding recreational and tourism opportunities. However, with the increasing presence of noxious weeds, this natural scenery is giving way to a landscape of purple and yellow flowers. The rich, native plant communities, that awed Lewis and Clark, are now seriously threatened.

The same health concerns in animals also can affect people. The latex in leafy spurge causes severe irritation to skin, eyes and other sensitive areas if contact is made. Many invasive plant species are poisonous. Each year people become severely ill and occasionally die from consuming poison hemlock in the United States. Its identity is often confused with a wild growing water parsley. Poison hemlock is quite common and occurs in several areas along the Missouri River. Thistle species can scratch and puncture the skin of unwary hikers and campers. In some areas along the river, Canada thistle is so dense it is difficult to walk to the waters edge.

Designated recreation areas seem to be the most "weedy" places along the river. This is most likely due to their highly developed seed dispersal mechanisms. Most species of invasive plants have some adaptation that allows the seed to stick or attach to camping equipment or clothing. Seeds are picked up and easily transported from one site to another. Without preventive action, this method of spreading invasive plants will only get worse with the ever-increasing numbers of people visiting the Upper Missouri River National Monument each year.

Weeds Impact Land Value-

The value of land is reduced by invasive plant infestations. Because little can be done with land that is heavily infested with invasive plants, and the extreme cost in time and money to control weeds, land values are severely reduced. This affects public lands identified for sale, potential land exchanges and conservation easements.

Weeds Impact Cultural Resources-

Although direct impacts to archaeological sites are hard to assess, sites can deteriorate from accelerated soil loss in areas infested with weeds. Noxious weeds also increase the fire danger around historic homesteads and outbuildings along the river corridor. Noxious weeds provide more fuel exposing sites to a higher fire danger. Noxious weeds also can negatively impact a visitor's experience. Weeds next to buildings or other features have an effect on the interpretive value of historic sites and scenic landscapes.

Weeds Impact Riparian Health-

Invasive plant species have the potential to further degrade riparian areas by interfering with the cycle of cottonwood and willow regeneration. This can affect recreation, wildlife and many other land uses. Species such as salt cedar, purple loosestrife and perennial pepperweed aggressively compete for nutrients, space and water. In most cases, invasive species like these displace native vegetation creating a dense monoculture. Cottonwood, willows and other vegetation cannot compete under these conditions. The change in plant cover can cause a dramatic change in the animal and soil components of the system. Few wildlife species can adapt to "weedy" plant communities. Soil that was held in place by native species can be removed through wind and water events. Eroded areas increase the probability that native vegetation will not reestablish and compete with invasive plant species.

Weeds Impact the Future-

One of the greatest obstacles in maintaining healthy ecosystems and restoring impaired systems is noxious weeds (Partners Against Weeds, BLM Action Plan, 1996). Our experience with invasive weeds along the Missouri River indicates the BLM needs to act quickly to reverse the current trend. Without an increased level of commitment, the amount of invasive plants will soon outreach our containment efforts. The challenge of controlling weeds may seem overwhelming. However, the future of the Upper Missouri River ecosystem is at stake. Our challenge is to develop management strategies and support. How quickly the BLM reacts to this emergency will affect the potential and preservation of this national treasure.

UMRBNM Noxious Weed Species List:

Category 1:

- Russian Knapweed
- Leafy Spurge
- Canada Thistle

Category 2:

- Spotted Knapweed
- Perennial Pepperweed
- Hoary Cress
- Poison Hemlock
- Field Bindweed
- Musk Thistle
- Russian Olive
- Black Henbane

Category 3:

- Salt Cedar
- Purple Loosestrife
- Dalmatian Toadflax
- Houndstongue
- Baby's Breath

This category system prioritizes weed species for more effective management. The definition of each category is found in the "Management Strategies" portion of this document.

GOALS

1. *Designate the Upper Missouri River Breaks National Monument as a "Weed Management Area" to facilitate cooperation among landowners and various state and federal agencies and secure funding to implement integrated weed management control measures.*

2. *Increase public awareness of invasive plant and weed species within the UMRBNM.*

3. *Prevent the introduction and spread of UMRBNM Category 3 weeds.*

4. *Eradicate <u>all</u> existing UMRBNM Category 3 weed species.*

5. *Contain <u>all</u> large infestations of UMRBNM Category 1 and 2 weed species.*

6. *Develop treatment strategies to control noxious weeds in and around developed and primitive recreation use areas.*

7. *Develop treatment strategies to control or eradicate low den sity weed populations throughout the entire UMRBNM.*

8. *Improve the "Health of the Land" by successfully meeting these goals through a cooperative integrated management effort.*

Weed Management Areas

The Upper Missouri River Breaks National Monument represents a large area of land with many diverse landowners, administrative boundaries and geographical areas. Beginning at Fort Benton, the river corridor winds its way 149 miles to the eastern edge of the monument boundary marked by the James Kipp Recreation Area, where US Highway 191 crosses the Missouri River. Land ownership within the UMRBNM consists of BLM (374,724 acres), State of Montana (38,760 acres) and various private ownership (81,715 acres) involving four county governments, Chouteau, Blaine, Fergus, and Phillips. The monument designation also includes land in a 15 mile portion of Arrow Creek to its confluence with the Missouri River. The map below displays the boundary and land status within the Upper Missouri River Breaks National Monument. This presents a difficult challenge - coordinating the efforts of many different private landowners, several county governments and state and federal agencies to effectively solve complex weed management problems along the Missouri River. To accomplish this the BLM proposes to designate the entire UMRBNM as a "weed management area". The advantages of this are numerous. Weed management areas (WMA's) are largely established to coordinate weed control efforts, set priorities and pool resources. WMA's allow land managers and private landowners to set logical boundaries to better address weed problems as a whole rather than along administrative units. Successful weed management areas have created strong partnerships allowing many individuals to work together to jointly prioritize weed management efforts by weed species and geographical area. Cooperators work together to map, plan, monitor and implement treatments to contain and control invasive plant species. This effort is key to successfully managing noxious plant invasions along the Missouri River.

To assist this process, the BLM will initiate cooperative agreements, working through the local county weed coordinator, with private landowners to create smaller, more workable weed management areas. This will allow planning to be done in a more localized fashion including private, state and federal land managers. Results of this effort will include site specific and species specific management strategies organized by categories of weeds, recreation areas, such as Kipp Park and Coal Banks Landing and sensitive areas such as riparian zones and habitat for threatened and endangered species and infestations adjacent to agricultural areas.

The following are some advantages of cooperating in a WMA (Guidelines for Coordinated Weed Management of Noxious Weeds: Development of Weed Management Areas, 1999):

- It encourages cooperators to plan through the problem to its successful resolution. The plan results in the greatest good for the entire WMA in the long run. Cooperators can locally prioritize and give emphasis to species that are a particular threat with individual WMA's.

- The designation of a WMA by diverse individuals and agencies focuses attention and provides a unified effort to state and federal legislators. It also communicates to the general public the seriousness of noxious weeds by increasing awareness and the need to contain or prevent infestations.

- A WMA pools talents and resources.

- Under the WMA plan, a landowner or land manager can address the problem of weeds spreading from neighboring land before the damage occurs.

- A WMA provides a channel for communication within the WMA.
- It reduces the risk of damage by control actions to water, crops and threatened and endangered species.
- The formation of a WMA increases the effectiveness of weed management by basing control efforts on biological and geographical factors rather than legal divisions.
- Designation of a WMA helps secure funding or identifies a method for funding. The creation of different management zones within the WMA fits the most effective and environmentally sound weed management and control practices to each zone.

A well-written and implemented plan within the framework of a WMA addresses the following potential concerns:

⇒ A private landowner or agency may relinquish some individual autonomy. Everyone gains efficiency and increases their ultimate success by participating in a WMA.
⇒ Individual or agency priorities may differ from the WMA priorities. But, success is greatest when managed within the context of the entire WMA.
⇒ The weed prioritization and planning process created by the WMA ensures that one jurisdiction or agency cannot dominate.
⇒ By involving representatives from all diverse interests within a WMA, agencies and landowners are more willing to share limited resources.

Initially, the UMRBNM is broken down into the following administrative units to describe an overall strategy for each weed management unit within the UMRBNM. Later, in section 11, site specific management strategies have been developed for all areas on public land.

Chouteau County:

The majority of lands along the river in Chouteau County are privately owned. To accurately identify problem weeds and areas, private lands will be inventoried adjacent the river corridor in cooperation with county weed district. Once mapped, the BLM will work together with the county and private landowners to develop management strategies to control or eradicate existing infestations and initiate programs to prevent the further introduction of weeds into the area. Improving public education and awareness is a high priority for the Chouteau County weed district.

Blaine, Fergus, & Phillips Counties:

The majority of lands in these counties are publicly owned and administered by the BLM. Management strategies will be similar to those in Chouteau County. Visual weed inventory estimates show that weed infestations are just as severe on private and state land as on public land. In cooperation with county weed districts, the BLM will enter into cooperative agreements with private landowners and state agencies to address the weed management problems. At the same time, the BLM will begin implementing weed control efforts on lands it administers. Grazing permit holders will be asked to cooperate in this effort. This may include money, labor or any other means of assistance.

BLM administered lands not already included in recreation weed management areas will be monitored annually. Suppression and eradication of high priority weeds, as well as containment treatments, will be conducted.

Charles M. Russell National Wildlife Refuge (Phillips & Fergus Counties):

The Upper Missouri River Breaks National Monument and the Charles M. Russell National Wildlife Refuge (CMR) share a common boundary for about 10 miles along the lower end of the monument boundary. The BLM's responsibility only includes the shores of the Missouri River as it passes through the wildlife refuge. This section is relatively free of weeds or only contains small spot infestations. However, CMR does have a severe weed problem below James Kipp Park as you get closer to the tail waters of Fort Peck Reservoir. This creates a need for the BLM and the Fish & Wildlife Service (FWS) to cooperate in managing invasive and noxious weeds along this area of the river. This will help create a buffer for the detection and eradication of weeds moving up and down the river from one administrative area to another.

Integrated Weed Management

Integrated Weed Management (IWM) is a systems approach employing many different management practices to contain and control invasive plant species. IWM looks at combining:

- Cultural control methods are aimed at improving desirable vegetation, altering grazing practices, fertilization and planting desirable species to offer a competitive understory of desirable plants.
- Physical control methods make use of prescribed burns to remove decadent plant material and stress weed species. Mowing and hand pulling are commonly used to control weeds.
- Chemical control targets the weed species to stress and kill the plant favoring desirable grasses.
- Biological control emphasizes the use of natural predators and disease to reduce weed vigor and health.

Integrated weed management is the application of the following elements:

- Prevention & Early Detection
- Education & Awareness
- Inventory
- Planning
- Treatment
- Monitoring & Evaluation
- Reporting

Using IWM within the UMRBNM will involve a detailed planning process that considers each infestation by site and by weed species. It identifies the safest and most effective control measures to be used in combination towards containment or eradication of the target infestation. Treatment selection depends on the weed species, compatibility of using several control treatments, effectiveness of the control technique, availability, land use, timing, environmental considerations and costs. IWM usually provides much better results when compared to using only one method of treatment.

Weed management within the UMRBNM has followed this approach for several years combining the use of herbicides and biological control agents, fire, hand pulling and mowing. For example, weed management efforts at Wood's Bottom near the Loma Bridge, have utilized a variety of management techniques to control and eradicate the high density of noxious weed infestations. Biological control agents have been released to control leafy spurge, poison hemlock and Canada thistle. In combination with this effort, fire has been used to improve herbicide effectiveness and increase the chance of insect establishment, areas of spotted knapweed have been mowed to prevent seed production, successful grass plantings have increased competition and application of herbicides have been used to eradicate spot infestations. The result today is a much smaller presence of noxious weeds on the landscape reducing control efforts to minimal annual treatments.

These are just a few of the integrated weed management tools that will be employed in the UMRBNM to provide healthy, weed resistant plant communities.

Education & Awareness

Awareness of what noxious weeds are and the problems they cause will help land managers and the public-at-large understand why long-term weed management is so important. The more informed the public is about the problem, the more support they can provide in implementing solutions. Government staff at the federal, state and local levels also need to be informed on the impacts of invasive and noxious weeds as well as trained in the use of proper management techniques. To achieve this goal, the BLM must realize 3 objectives. These being (1) increase public awareness of the problem, (2) educate BLM employees on the problem and on using the right management techniques, and (3) provide training to staff to enable control measures to be implemented in the field.

Objective 1) Increase Public Awareness of Invasive & Noxious Weeds

To increase public awareness in the UMRBNM, the following strategies are suggested:

- Brochures – noxious weed brochures will be included in river and monument information packets mailed to the public. It will also be available to the public at put-in and take-out points and through campground hosts at developed recreation areas which includes the Fort Benton Visitor Center, Coal Banks Landing, Judith Landing, and James Kipp Recreational Area. Brochures will also be given to seasonal river employees and other field staff to distribute when in contact with the public.

- Demonstration Projects – demonstration projects will be created and maintained to illustrate the problem weeds are causing along the river corridor as well as some of the techniques the BLM is using to contain and control different weed species.

The following guidelines should be considered when creating a demonstration project:

- Sustainability for long term efforts in the area.
- Accessibility to the public.
- Illustrate the impacts of weed species in the area.
- Types of control techniques being used; chemical control is sometimes viewed in a negative way.
- How each control technique is impacting the area.
- Explain why the chosen technique is an acceptable choice in the area.

Field tours will be conducted at demonstration areas to gain support for what is being done and to show the benefits of cooperative weed management projects along the Missouri River.

- Biological Control Collection – if current populations of biological control insects continue to grow, the BLM will hold collection days for private landowners and other state and federal agencies to collect and redistribute insects to suitable locations along the river. This provides an opportunity to further educate landowners about what the BLM is currently doing and to facilitate cooperative efforts.

- Future Weed Managers – the BLM will look for opportunities to involve local youth in weed management activities. Contacts could be made with teachers or local group leaders such as Boy and Girl Scouts, FFA and 4-H to coordinate field days. Hands on activities could include biological control release and collection, evaluation of native verse invasive plants and even weed pulling contests. All of these activities have been very successful in other areas of the state.

Objective 2) Increase Internal Awareness

The following strategies are suggested for increasing awareness within the BLM:

- Newsletter – an informational newsletter to inform BLM offices and weed districts of ongoing weed management efforts along the Missouri River. This outreach effort will be continued with distribution expanded to include state land agencies, private landowners, private conservation organizations, and other federal agencies.

- BLM Staff Training – a workshop for all field and seasonal recreation staff will be held annually. The focus of the workshop will be identification, awareness and how to report new weed infestations.

  1. *Identification* - staff will be taught to identify weeds, where they are most likely to be found and areas where they are likely to invade.

  2. *Awareness* - staff will be trained to educate public recreation users on the impacts of invasive species and what prevention measures they can follow to reduce the risk of spreading weeds to other areas in the monument.

  3. *Reporting* - staff will be taught how to report new weed infestations, collect specimen materials in a way that does not promote the spread of weeds and show the public how to report infestations.

Objective 3) Training & Certification

In order for BLM personnel to implement effective measures to control invasive and noxious weeds, there are some training requirements that must be met to ensure employee safety.

Pesticide Use:

In compliance with state and federal regulations, the weed coordinator will be certified in the safe handling and application of all pesticides, including herbicides used on public lands. This certification can either be a government applicators license issued by the BLM or the Montana Commercial Applicators License. The BLM and State of Montana currently have a reciprocal agreement standardizing training and certification requirements for using pesticides on state and federal land.

Other staff that will be in contact with herbicides are not required to be certified or licensed but must be under the direct supervision of a certified applicator. However, all staff that will be using herbicides must at least have the Montana
State Commercial Applicators license as directed by the National Office in 2001.

BLM weed coordinators must also attend the WSWS Noxious Weed Short-coarse.

Specialized Equipment & Vehicle Operations:

Due to the rugged terrain and limited access to many areas along the river, many different types of equipment will be used to inventory infested areas, apply herbicides and monitor treatment areas. These include ATV's, canoe, motorized boat, 4-wheel drive pickups, backpack sprayers and pump spray units. BLM staff using this equipment will be trained and certified in their safe and proper use. The Coast Guard and many local ATV distributors are good sources for training if BLM courses are not available.

Prevention

One of our goals is to keep new invaders from entering the UMRBNM and prevent weeds from spreading to relatively "weed free" areas. Prevention, early detection and eradication are without a doubt the most practical, economical and effective means of accomplishing this. Implementing good prevention measures and educating public land users will allow us to identify and take action early against new invaders keeping important resource lands "weed free". Some of the common methods of introduction in the UMRBNM include:

- Recreational users camping in infested areas are picking up seeds and plant parts on equipment and clothing and transporting them to other sites.
- Seed is transported by wildlife and livestock through feces and attached to hair.
- Contaminated hay, straw and feed used for camping and domestic animals.
- Seed carried from upstream infestations by the Missouri River.
- Vehicles from other parts of the state and other states are bringing in new invaders.
- Contaminated gravel used for road fill.

To curtail the introduction and spread of weeds, the UMRBNM staff will fully implement the prevention and treatment strategies listed in Appendix 2. Incorporating these actions into day to day activities will be especially important as the number of people visiting the area increase every year.

In addition to implementing the prevention strategies, all Category 2 and 3 noxious weeds will be aggressively treated to completely eliminate them from the UMRBNM. At present there are 6 new weed species of great concern. Each will be closely monitored for early detection and eradication. These being:

Perennial Pepperweed (*Lepidum latifolium*)
Salt Cedar (*Tamarix spp*.)
Purple Loosestrife (*Lythrium salicaria*)
Dalmatian Toadflax (*Linaria dalmatica*)
Hoary Cress (*Cardaria draba*)
Houndstongue (*Cynoglossum officionale)*

Infestations of these weeds are very small, isolated, and for some, only involve 1 or 2 plants. However, the monument must be continually surveyed to find and eradicate new starts.

The most effective prevention technique for the Upper Missouri River is education and awareness. Because of the great number of people who visit the river corridor each year, there will be countless opportunities to increase the awareness of the weed problem within the UMRBNM. If the public knows what problems these plants are causing and what they look like, many citizens will apply this knowledge to identify and report new invasive species making a major difference in the spread and control of noxious weeds.
Noxious weeds can pose other special management problems following wildfire to prevent their invasion into recently disturbed areas. Although wildfire is a natural part of the ecosystem, planning following these events should take on emergency proportions to minimize the risk of invasive weeds. The Guidelines for Coordinated Management of Noxious Weeds: Development of Weed Management Areas (1999) offers the following best management practices to prevent the invasion of weeds following fire:

1. Consider rehabilitation as part of the suppression effort. Incorporate prevention of weed invasion into the rehabilitation plan.

2. Consider weed prevention as part of daily fire-fighting operations.

3. Emphasize light on the land tactics to minimize the amount of soil disturbance.

4. Require the cleaning of equipment used on the fireline and in camp.

5. Avoid staging equipment and resources in noxious weed infested areas.

6. Delineate noxious weed infestations and erect a barrier to prevent spread from those areas.

7. Consider the ecological and economical costs of potential invasion by weeds in the escaped fire analysis and the possible benefits of the contain and confine options. Aggressive suppression may result in the least amount of land disturbed by fireline and camps. The cheapest option will probably result in the least disturbance.

8. Use only seed and mulch that is certified weed/weed seed free.

9. Restore firelines using the same material that was removed during construction.

10. Start rehabilitation immediately after the fire is out or as soon as possible.

11. Use aircraft to minimize disturbance.

Weed Mapping

The foundation of any weed management program is the understanding of what weed species are present, where they are located and the severity of the problem. This baseline information is important to make effective management decisions. As identified in the Partners Against Weeds, all field offices are instructed to use the inventory and mapping procedures found in the Guidelines for Coordinated Management of Noxious Weeds: Development of Weed Management Areas (1999).

To date, inventories have consisted of detailed mapping using GPS technology and organized weed surveys and spot sightings. Using standardized mapping procedures, the BLM and other organizations can integrate the baseline information recorded by different individuals and agencies. This allows the manager the use of common data to:

- Delineate weed infestations.
- Identify areas susceptible to future weed invasion.
- Assess potential and realized economic damage.
- Develop, implement, and evaluate treatment plans.
- Increase public awareness both visually and statistically.

BLM administered land within the UMRBNM totals about 375,000 acres. Of the approximately 20,000 acres of public land that has been inventoried immediately adjacent the river, 492 acres are infested with some species of invasive plant.

The Noxious Weed Sighting Report, Appendix 3 , will be available to UMRBNM staff and the public to report new infestations of noxious weeds. The use of this form will allow the BLM to continually survey the area for new invaders and new starts.

Inventory methods and surveys will continually be improved to locate and map noxious weed infestations through GPS technology and remote sensing. However, the most cost effective tool available will be educated staff and public land users committed to finding, noting and reporting any weeds observed during their workday or trip through the monument. This emphasizes the need to actively support and implement an education and awareness program.

Monitor & Evaluation

Monitoring and evaluation will provide answers about the effectiveness of our weed control efforts and the wise investment of our time and resources. The UMRBNM was inventoried during 1999 and 2000 providing needed baseline information to give a comprehensive picture of the location, density and severity of the noxious weed problem. This information is being used to develop weed management strategies for controlling weeds in important recreation, riparian and wildlife areas and for controlling category 1, 2 and 3 weed species. Data collected in subsequent years will provide managers with information to judge the overall effectiveness of the weed management program evaluating herbicide applications, biocontrol releases, prevention measures and education programs.

The type of information collected and the intensity of monitoring depends on the importance of the resource and the funding available. Some critical habitat areas may require very intense levels of monitoring to protect high value resources. Information collected in critical areas such as riparian zones and recreation sites, will be used to monitor on-the-ground management actions. General observations will be a critical component providing information about weather and nontarget vegetation. To make effective use of time and resources, three levels of monitoring intensity will be adopted for use along the UMRBNM.

Level I – Low Intensity

Objective: To detect new infestations and to assess the success of incidental or small scale control programs.

- Efforts under this level will be directed toward locating new starts and new invaders. Weed seasonals, river seasonals, area staffs and the public are an available resource to survey the corridor each season. Information will be recorded on the Noxious Weed Sighting Form. General observations and photo points will be used to evaluate minor weed treatments.

Level II – Moderate Intensity

Objective: Assess success of current chemical treatments, biological control and prevention programs to recommend changes or program adjustments.

- Compliance with the UMRBNM Weed Prevention Schedule - evaluate implementation of weed prevention strategies as outlined in Appendix 3.

- Herbicide Applications - pretreatment analysis, photos before and after treatment, weather, timing, rate and type of herbicide.

- Biological Control - photo points and insect collections will be used to evaluate success of releases.

Level III – High Intensity

Objective: Evaluate success of the weed management program and implementation of on-the-ground actions. This might include a written assessment summarizing all the actions taken following 5 years of implementation. The evaluation should consider the following areas and questions:

- Are the goals established for the UMRBNM being met?
- Were the management strategies adequate to control existing weed populations for each site and for each weed species?

- What was the total cost of weed suppression?
- How many acres were treated?
- How many biocontrol agents were released?
- Should another kind of treatment be considered?
- Are the education, early detection and prevention strategies working?
- Was funding and manpower available at the appropriate time?
- What impacts are the treatment strategies having on other resources?
- What changes can be made to the annual management plan based on evaluations?

Reporting

Record keeping will be essential to provide useful information needed to make sound management decisions and to help trace problems that might come up from applying herbicides or recommend changes in the rate and timing of herbicide application. An adequate level of documentation will be required to meet state and federal weed management laws. In addition, good documentation aids in justifying the costs associated with control, helps determine progress and provides information to adjust control strategies. Listed below are the records that will be needed to document weed control activities.

- Maintain an inventory and maps of weed species present within the UMRBNM.
- Maintain Pesticide Use Proposals for approved use of herbicide applications.
- Maintain Pesticide Application Records, to be filled out within 24 hours of application, providing specific information about the kind of herbicide, rate, timing, location, acres treated and target species.
- Maintain Biological Control Release Proposals for approved introduction of biological control agents into the Missouri River ecosystem.
- Maintain Biological Control Release records indicating location and kind and number of insects released.

The following reports are required by the BLM State (SO) and Headquarters (WO) offices:

Weed Management Area Status Report
This annual report charts the progress made in an individual weed management area. It also reports the funding required to complete all of the planned objectives.

Annual Report on Weed Management Program
This annual report provides the SO and WO with information on the overall integrated weed management program that was accomplished each year to include acreage treated by each treatment method, funding and funding source, major weed species treated as well as acres inventoried, mapped, and monitored.

Pesticide Use Report
This report must be furnished to EPA annually through the WO. It provides a variety of information on the herbicide used - rate, active ingredient, acres treated and method applied.

County/District Weed Inventory
This is a report collected every 3 years showing the inventoried and estimated weed infestations for each county. This information helps managers and administrators realize the actual spread of invasive plant species and estimate the resources required to contain and control them.

In addition, yearly reports will be submitted to county weed districts to keep them informed of weed control efforts in their area of responsibility.

Budget

The historical increase of invasive and noxious weeds on public land within the Upper Missouri River Breaks National Monument has been approximately 23% per year as the graph below illustrates. This expansion has occurred contrary to the efforts, time and funding spent during the last 10 years to control this problem. This raises a serious concern. Since our current level of containment is not adequate, these weeds have the potential to further invade over 3,000 acres of wildlife and riparian habitat, recreation sites, scenic landscapes and adjacent hay and farm lands.

The difficulty with past management efforts was how to address the total weed problem, over a large area, with many different landowners, given limited time and resources. In 1985, the BLM began budgeting for the management of weeds on public lands. Very few of these dollars were spent on the Missouri River other than in a few, select locations. With limited funding and staff, BLM personnel had to decide whether to contain all of the infestations, and have no actual reduction in weed population numbers, or focus on eradicating small, isolated infestations. Only in the past 3 to 5 years has the BLM allocated enough funding to allow for more consistent management of weeds on the Upper Missouri River.

By acquiring the needed resources and implementing a long-term strategy, it is estimated there will be an annual reduction of about 10% in the population of invasive and noxious weeds (graph at right). Increased and consistent funding will be critical to reach a satisfactory level of control and meet the goals established for the Upper Missouri River Breaks National Monument. Funding must be balanced between control efforts and stopping the introduction of new weed species into the area. Current staffing levels are adequate to realize many of the goals in education, awareness, early detection and prevention. However, site and weed specific treatment strategies will require a higher level of funding to cover labor, material and equipment costs.

Resource		Estimated Cost/Year
(1) Weed Specialist	12WM @ $4786/WM	$57,432
(1) Career Seasonal	6WM @ $2500/WM	$15,000
(2) Seasonal Employees (Inventory, Application, Monitoring)	8 WM @ $2500/WM	$20,000
Herbicides to treat:	Russian Knapweed	$5,000
	Leafy Spurge	$1,000
	Canada Thistle	$300
	Other weeds	$200

Vehicle Rental (GSA)		$7,500
Miscellaneous Expenses	Clothing, gloves, ATV repairs, boat repairs, sweep nets, sprayer parts	$1500
Training	Licensing, Certifications	$500
Contracts	Private applicator contracts in specialized use areas	$2,000
	Total	**$110,432**

Allowing weedy plants to dominate the Upper Missouri ecosystem would:

1. Alter the "scenic" qualities which most visitors come to view.
2. Reduce native plant diversity, abundance, and richness.
3. Reduce food and cover required by wildlife.
4. Alter fire frequencies and increase erosion which favors weedy species recruitment rather than desirable native species.
5. Encroachment of weeds on public lands into private hay/crop fields would be detrimental to public relations, and could lead to litigation if said fields were certified "weed free".
6. Cause health concerns for public land users as most weeds contain chemicals that can serious poisoning and or severe irritation .
7. Impact cultural resources by means of erosion and fire.
8. Reduce capacity for livestock utilization.
9. Lower land value due to low productivity and high cost of removing infestations.
10. Serve as new seed sources to be moved by incidental contact by people, animals, wind, and water.

To achieve this reduction, it is estimated that an annual operating budget of $110,432 will be needed. The following table outlines the yearly costs associated with control and containment. Labor, contract, training and miscellaneous expenses will remain relatively constant each year. However, chemical costs may drop as the number of acres treated each year declines.
A balanced, well thought out, comprehensive weed management program will require consistent funding to successfully manage the large-scale weed management problems found within the Upper Missouri Breaks National Monument. Therefore, there exists a need for a full time Weed Scientist or Integrated Pest Management Specialist, not only for this WMA, but for BLM Field Offices and Stations statewide. This position would coordinate and conduct on the ground work, evaluate program success in order to modify treatments as needed, supervise contracts, ensure chemicals and equipment are used in a safe manner, manage demonstration projects and other education/awareness efforts, hire and supervise seasonal employees, and to acquire additional funding through cooperative efforts with federal, state, county, and private interests to manage multi-jurisdictional infestations.

As shown in the graph on page 21, the potential for weeds to become an even greater problem exists should the BLM delay the resources needed to contain the current weed problems. This area presents an opportunity for the BLM and it's cooperators to contain and reduce the weed problem. What decisions are made now it critical to the preservation of the Upper Missouri ecosystem.

Management Strategies

The size and complexity of the noxious weed problems in the Upper Missouri River Breaks National Monument requires a comprehensive plan of action that includes two major elements. First, a treatment method was developed for each noxious weed found or likely to be found within the monument boundary. Second, detailed treatment strategies, utilizing all of the tools of integrated weed management, were developed for each area or site along the river. Specific control measures could then be outlined and applied to developed and primitive recreation use areas and critical wildlife habitat such as islands and riparian areas. To help organize and assign priorities for each weed species, weeds were placed into 1 of 3 categories modeled after the Montana Noxious Weed List.

Category 1 noxious weeds are currently established and generally widespread throughout the UMRBNM. Management criteria includes awareness and education, containment and suppression of existing infestations and prevention of new infestations.

- Russian Knapweed
- Leafy Spurge
- Canada Thistle

Category 2 noxious weeds have recently been introduced into the UMRBNM or are rapidly spreading from their current infestation areas. Management includes awareness and education, monitoring, containment of known infestations and eradication where possible.

- Spotted Knapweed
- Perennial Pepperweed
- Hoary Cress
- Black Henbane
- Poison Hemlock
- Field Bindweed
- Musk Thistle
- Russian Olive

Category 3 noxious weeds have not been detected in the UMRBNM or may be found only in small, scattered, localized infestations. Management includes awareness and education, early detection and immediate action to eradicate infestations. These weeds are known pests in nearby areas and are capable of rapid spread throughout the river corridor.

- Salt Cedar
- Purple Loosestrife
- Dalmatian Toadflax
- Houndstongue
- Baby's Breath

The following table lists the preferred treatment strategy for all Category 1 and 2 weed species.

Treatment Strategies for Category 1 Species

Weed Species	Acres In-fested	Treatment Type	Comments
Russian Knapweed	243	Herbicide (100%)	Herbicides are currently the only effective management tool available. Biocontrol agents released in the early 1990's have been ineffective.
Leafy Spurge	197	Herbicide (60%) Biological (40%)	Herbicides will be used to contain large areas and to eradicate small, isolated infestations. Biocontrol agents will continue to be released concentrating on islands, large infestations and other sensitive areas.
Canada Thistle	29	Herbicide (90%) Biological (10%)	Herbicide applications will occur in areas where eradication is possible. Biocontrol will continue on large infestations and islands.

Treatment Strategies for Category 2 Species

Weed Species	Acres Infested	Treatment Type
Spotted Knapweed	11	Herbicide Manual Pulling Biological
Perennial Pepperweed	5	Herbicide
Hoary Cress	2	Herbicide + Mowing
Russian Olive	Un-known	Herbicide + Physical

Treatment Strategies for Category 3 Species

The treatment strategy for all category 3 weed species is simple yet extremely important - identify and aggressively treat every infestation to completely eliminate the weed from the UMBNM. Eradication of any new invaders will be the highest priority. The use of herbicides, where environmentally safe and cost effective, will be the preferred treatment of choice. It is critical that we prevent any new invaders from becoming established on lands within and adjacent to the monument.

NOTE: As they become available, biological agents will be integrated into the management of each weed species regardless of category.

Site Specific Treatment Strategies

The second part of our management strategy involves implementing site specific guidelines for each area identified along the river. The site plans, located at the end of this section, describe the preferred methods of treatment, target species, timing and cautions. The table on the following page lists each site and the noxious weeds present.

Regrettably, noxious weeds will always be present within the Upper Missouri Breaks National Monument. Total eradication of all weed species and invasive plants is no longer a reasonable expectation. This is further compounded by the many ways that noxious weeds are regularly being introduced into the management area through flooding, wildlife, people and other surface disturbing activities. However, it is reasonable to expect, with a persistent and diligent effort to locate, map and take action to control, contain and eradicate noxious weeds, we can reduce the threat and manage them to where they are only a small part of the landscape.

APPENDIX C

Federal Oil and Gas Leases within the Monument Boundary

Ref. No.	Lease No.	Lease Stips	Lease Effective Date	Section(s)	Township and Range	County	Leased Acreage within Monument Boundary	Leased Acreage Outside Monument Boundary	Total Lease	Lease Status - HBP Actual, Allocated or No Production
1	MTM 1565	A	5/1/67	24 25 26 27	25N/19E	Blaine	1,680.00	1,680.00	3,360.00	Actual/Allocated
2	MTM 1568	A	5/1/67	11 12 13 14	25N/19E	Blaine	2,320.00	240.00	2,560.00	Actual
3	MTM 1578	A	5/1/67	28 29 30 31 32	25N/19E	Blaine	1,600.00	962.69	2,562.69	Actual
4	MTM 1885	A	6/1/67	1 2	26N/20E	Blaine	40.00	611.41	651.41	Allocated
5	MTM 1886	A	6/1/67	9 10 11 12	26N/20E	Blaine	1,920.00	640.00	2,560.00	Actual
6	MTM 1888	A	6/1/67	2 3 4 6	26N/20E	Blaine	480.00	1,981.62	2,461.62	Actual
7	MTM 1903	A	6/1/67	23 24 25 35	26N/20E	Blaine	1,240.00	320.00	1,560.00	Allocated
8	MTM 1903-B	A	6/1/67	26	26N/20E	Blaine	320.00	240.00	560.00	Actual
9	MTM 1914	A	6/1/67	15	25N/20E	Blaine	200.00	440.00	640.00	Actual
10	MTM 2060	A	7/1/67	15 21 22 28 29 32	24N/20E	Blaine	640.00	0.00	640.00	Actual
11	MTM 2061	A	7/1/67	21 28 29 31 32	24N/20E	Blaine	640.00	0.00	640.00	Allocated
12	MTM 13816 *	A	11/1/69	7	24N/21E	Blaine	461.99	0.00	461.99	Actual
12	MTM 13816 *	A	11/1/69	11 12 13 14 15	24N/20E	Blaine	2,028.46	0.00	2,028.46	Actual
13	MTM 13818	A	11/1/69	20 21 28 29 30 31	24N/20E	Blaine	2,492.32	0.00	2,492.32	Allocated
14	MTM 13821-A	A	11/1/69	29 30 31 32	24N/21E	Blaine	1,098.90	0.00	1,098.90	Actual
15	MTM 13827	A	11/1/69	11 27 29 30	24N/21E	Blaine	1,155.72	0.00	1,155.72	Allocated
16	MTM 16098	A	9/1/70	14 15 17 19 20 21 22	24N/19E	Blaine	1,160.00	1,360.00	2,520.00	Allocated
17	MTM 16102	A	9/1/70	3 20 30	25N/20E	Blaine	1,506.35	163.09	1,669.44	Allocated
18	MTM 16103	A	9/1/70	22 27 28 33 34	26N/20E	Blaine	60.00	2,460.00	2,520.00	Actual
19	MTM 16327	A	10/1/70	9 10 11 14 15 22 23 27 34	24N/18E	Chouteau	80.00	2,358.12	2,438.12	Actual/Allocated
20	MTM 16458	A	10/1/70	21 23 24 25 27 33	26N/20E	Blaine	720.00	1,240.00	1,960.00	Actual
21	MTM 16461	A	10/1/70	29 31 32 33	25N/20E	Blaine	2,547.36	0.00	2,547.36	Actual
22	MTM 16617	A	11/1/70	7 8 10 17 18 19 22 25	22N/18E	Fergus	330.44	1,088.70	1,419.14	Allocated
23	MTM 16618	A	11/1/70	23 24 25 26 35 36	24N/18E	Chouteau	320.00	2,240.00	2,560.00	Actual/Allocated
24	MTM 16939	A	12/1/70	7 17 18 19	25N/21E	Blaine	2,529.92	0.00	2,529.92	Actual
25	MTM 17376	A	2/1/71	7 33 35	24N/18E	Chouteau	40.00	80.00	120.00	Allocated
26	MTM 18274	B	7/1/71	4 5 9 10 13 14 15 17 22 23 24	22N/18E	Fergus	1,367.04	1,160.00	2,527.04	Allocated
27	MTM 19446	A	9/1/71	30 31	24N/17E	Chouteau	110.43	1,112.66	1,223.09	Actual/Allocated
28	MTM 18282	C	5/1/73	29 30 31 32 33	23N/19E	Blaine	539.13	1,992.35	2,531.48	Actual
29	MTM 18283	C	5/1/73	22 23 24 26 27 28 29	23N/19E	Blaine	1,000.00	1,560.00	2,560.00	Actual/Allocated
30	MTM 53751	D	6/1/82	20 21 22 23 24	23N/19E	Blaine	680.00	160.00	840.00	Actual
31	MTM 82786	E	3/1/94	7 8 9 10 11 12 13	24N/19E	Blaine	1,434.12	1,104.42	2,538.54	No Prod.
32	MTM 84559	E	11/1/95	5 6 7	25N/20E	Blaine	1,879.92	0.00	1,879.92	No Prod.
33	MTM 84560	E	11/1/95	6 7 31	26N/20E	Blaine	120.00	1,132.81	1,252.81	No Prod.
34	MTM 87212	E	9/1/97	3	25N/19E	Blaine	122.45	527.87	650.32	No Prod.
35	MTM 87658	E	2/1/98	25	24N/20E	Blaine	485.00	0.00	485.00	No Prod.
36	MTM 89082	F	5/1/99	1 2	25N/19E	Blaine	1,131.40	167.00	1,298.40	No Prod.
37	MTM 89452	F	11/1/99	4 5 9	23N/17E	Chouteau	800.00	333.47	1,133.47	No Prod.
38	MTM 89460	F	11/1/99	7 11	22N/18E	Fergus	400.00	40.00	440.00	No Prod.
39	MTM 89469	F	11/1/99	35	25N/19E	Blaine	360.00	280.00	640.00	No Prod.
40	MTM 89473	F	11/1/99	15 21 22	24N/20E	Blaine	1,240.00	0.00	1,240.00	No Prod.
41	MTM 89474	F	11/1/99	10	25N/20E	Blaine	80.00	480.00	560.00	No Prod.
42	MTM 89482	F	11/1/99	19 20 29	24N/21E	Blaine	1,416.40	0.00	1,416.40	No Prod.
43	MTM 89475	F	12/1/99	13 17	25N/20E	Blaine	1,280.00	0.00	1,280.00	No Prod.
44	MTM 89476	F	12/1/99	21 22	25N/20E	Blaine	1,120.00	160.00	1,280.00	No Prod.
						Total	43,177.35 Acres	28,316.21 Acres	71,493.56 Acres	

* - Note that lease lies within two townships.

A - No Lease Stipulations Attached.

B - Lease Stipulation Attached: MSO 3100-11

C - Lease Stipulations Attached: MSO 3100-24 (9/72); MSO 3100-28 (3/73); Rider regarding assignments

D - Lease Stipulations Attached: 3109-5 (8/73), MT-3109-1 (12/81) Formerly MSO 3100-47c;
MT-3109-4 (12/81) Formerly MSO 3100-51; MT-3100-52 (4/82)

E - Lease Stipulation Attached: MT3109-1 (4/87)

F - Lease Stipulation Attached: Standard (9/98)

Current unleased Federal Mineral Acreage within the Monument is 226,771 acres.

Current leased Federal Mineral Acreage within the Monument is 43,177 acres.

Current Federal Mineral Acreage within the Monument is 269,948 acres.

APPENDIX D

OIL and GAS LEASE STIPULATIONS

SAMPLE FORMS

MSO 3100-11
MSO 3100-24
MSO 3100-28
MT 3109-1

SAMPLE

M 18274

STIPULATIONS FOR LAND
WITHIN THE PROPOSED MISSOURI RIVER SCENIC AREA

The following described lands are within the boundary of the proposed Missouri River Scenic Area:

T22N, R18E, P.M.M.

Sec. 4: Lots 1,2,3,4, S½ N½
Sec. 5: Lots 1,2,3,4, S½ N½

The immediate office having jurisdiction over these lands is:

District Manager, Lewistown District
Bureau of Land Management
Bank Electric Building Telephone:
Drawer 1160
Lewistown, MT 59457

The lessee hereby agrees the following stipulations are part of the lease terms:

A. At least two weeks prior to entry on the land for purposes of field operations, including seismic work, the lessee must advise the District Manager, Bureau of Land Management and after consultation prepare a "Surface Management Plan." The final plan shall be prepared in duplicate, including maps, for approval by the District Manager. Such approval will be conditioned on reasonable requirements needed to prevent soil erosion, air and water pollution, unnecessary damages to the surface vegetation and other resources of the United States and to provide for the restoration of the land surface and vegetation. The plan shall contain all such provisions as the Bureau of Land Management may deem necessary to maintain proper management of the lands and resources within the operating area.

The plan will contain the following items:

1. The location, construction specifications, maintenance program, and estimated use by the lessee, his employees and agents, of all access and work roads.

2. The methods to be used in the operations, including disposal of waste material.

3. The size and location of all structures and facilities to be constructed.

4. The location and size of areas upon which vegetation will be destroyed and/or soil laid bare and the steps which will be taken to prevent and control soil erosion thereon, including but not limited to the proposed program for rehabilitation and revegetation of these disturbed lands both during and upon cessation of operations.

5. The steps which will be taken to prevent water and air pollution.

6. The character, amount, and time of use of explosives or fire, including safety precautions which will be taken during their use.

7. Provisions for protecting permitted livestock and wildlife.

SAMPLE

B. Prior to seismic field operations, if the lessee does not have appropriate bonding coverage, it will be necessary for him to furnish an Oil and Gas Exploration Bond (43 CFR sec. 3104.9).

If later operations require departure from or additions to the approved plan, these revisions or amendments, together with justification statement for proposed revisions, will be submitted to the District Manager for approval.

Any and all operations conducted in advance of approval of an original, revised or amended operating plan, or which are not in accord with an approved plan, constitute a violation of the terms of this lease and the Bureau of Land management reserves the right to close down the operation until such corrective action, as is deemed necessary, is taken by the lessee.

C. No occupancy of the surface of the areas described in items 1 through 4 below is authorized by this lease. The lessee is, however, authorized to employ directional drilling to develop the mineral resources under these areas provided that such drilling or other works will not disturb the surface area or otherwise interfere with their use by the Bureau of Land Management. It is understood and agreed that the use of these areas for public purposes is superior to any other use. Areas to be excluded from direct drilling occupancy are:

1. Within 660 feet on either side of the right-of-way boundary of any and all improved roads and/or highways within the lease areas.

2. Within 100 feet on either side of the centerline of any and all trails within the lease area.

3. Within 300 feet of the normal high water line of any and all lakes, ponds, and reservoirs located within the lease area.

4. Within 300 feet of any and all springs or water wells within the lease area.

The distances in subparagraphs 1, 2, 3, and 4, immediately above, may be reduced when specifically agreed to in the "Surface Management Plan."

No access or work trail, earth cut or fill, structure development, facility or any other improvement of a permanent nature will be permitted if it can be viewed from the high water surface of the Missouri River.

The undersigned hereby agrees the above requirements will be a part of the oil and gas lease terms and further agrees to abide fully with the "Surface Management Plan" as approved by the District manager, Bureau of Land Management.

_____
Lessee
CONTRACT AGENT

_____
Date

SAMPLE

DEPARTMENT OF INTERIOR STIPULATIONS

1. Notwithstanding any provision of this lease to the contrary, any drilling, construction or other operation on the leased lands that will disturb the surface thereof or otherwise affect the environment (hereinafter called "surface disturbing operations"), conducted by lessee, shall be subject, as set forth in this stipulation, to the prior approval of such operation by the Area Oil and Gas Supervisor, in consultation with the appropriate surface management agency and to such reasonable conditions not inconsistent with the purposes for which this lease is issued, as the Supervisor may require to protect the surface of the leased lands and the environment.

2. Prior to entry upon the land or the disturbance of the surface thereof for drilling or other purposes, the lessee shall submit for approval two copies of a map and explanation of the nature of the anticipated activity and surface disturbance to the

   Area Oil and Gas Supervisor
   Geological Survey Office
   P.O. Box 2859
   Casper, Wyoming 82601,

   and will also furnish the appropriate surface management agency:

   District Manager, Lewistown District Telephone:
   Bureau of Land Management
   Bank Electric Building
   Drawer 1160
   Lewistown, Montana 59457

   with a copy of such map and explanation.

   An environmental analysis will be made by the Geological Survey, in consultation with the appropriate surface management agency, for the purpose of insuring proper protection of the surface, the natural resources, the environment, existing improvements and for assuring timely reclamation of disturbed lands.

3. Upon completion of said environmental analysis, the Area Oil and Gas Supervisor shall notify lessee of the conditions, if any, to which the proposed surface disturbing operations will be subject. Said conditions may relate to any of the following:

   (a) The location of drilling or other exploratory or developmental operations or the manner in which they are conducted;

   (b) The type of vehicles that may be used and the areas in which they may be used; and

   (c) The manner or location in which the improvements, such as roads, buildings, pipelines or other improvements are to be constructed.

Signed this 24th day of April, 1973.

All lands in offer.

_____
(Lessee's Signature)

SAMPLE

SUPPLEMENTAL STIPULATIONS FOR LAND
WITHIN SENSITIVE AREAS UNDER JURISDICTION
OF THE BUREAU OF LAND MANAGEMENT

The immediate office having jurisdiction over the applicable land described is:

District Manager, Lewistown District, Bureau of Land Management
Bank Electric Building, Drawer 1160, Lewistown, Montana 59457

All lands in offer.

The lessee hereby agrees the following stipulations are part of the lease terms:

A. At least two weeks prior to entry on the land for purposes of field operations, including seismic work, the lessee must advise the district Manager, Bureau of land Management and after consultation prepare a "Surface Management Plan." The final plan shall be prepared in duplicate, including maps, for approval by the District Manager at least five (5) working days prior to entry on the land for field operations. Such approval will be conditioned on reasonable requirements needed to prevent soil erosion, air and water pollution, unnecessary damages to the surface vegetation and other resources of the United States and to provide for the restoration of the land surface and vegetation. The plan shall contain all such provisions as the Bureau of Land Management may deem necessary to maintain proper management of the lands and resources within the operating area.

The plan will contain the following items:

1. The location, construction specifications, maintenance program, and estimated use by the lessee, his employees and agents, of all access and work roads.

2. The methods to be used in the operations, including disposal of waste material.

3. The size and location of all structures and facilities to be constructed.

4. The location and size of areas upon which vegetation will be destroyed and/or soil laid bare and the steps which will be taken to prevent and control soil erosion thereon, including but not limited to the proposed program for rehabilitation and revegetation of these disturbed lands both during and upon cessation of operations.

5. The steps which will be taken to prevent water and air pollution.

6. The character, amount, and time of use of explosives or fire, including safety precautions which will be taken during their use.

7. Provisions for protecting wildlife and permitted livestock.

8. Provisions for protecting scenic areas, historical sites, archeological sites, critical wildlife habitat and outstanding geological features.

9. Time and duration of entry and use upon the area necessary to conduct operations authorized under this lease.

10. Source and transportation route of water needed for drilling operations. If water is taken from a private source, provide the name of the owner allowing such use.

SAMPLE

B. Prior to seismic field operations, if the lessee does not have appropriate bonding coverage, it will be necessary for him to furnish an Oil and Gas Exploration Bond (43 CFR Sec. 3104.9).

C. If later operations require departure from or additions to the approved plan, these revisions or amendments, together with justification statement for proposed revisions, will be submitted to the District Manager for approval.

Any and all operations conducted in advance of approval of an original, revised or amended operating plan, constitute a violation of the terms of this lease and the Bureau of Land Management reserves the right to suspend operations until such corrective action, as is deemed necessary, is taken by the lessee.

D. No occupancy of the surface of the areas described in items 1 through 4 below is authorized by this lease. The lessee is, however, authorized to employ directional drilling to develop the mineral resources under these areas provided that such drilling or other works will not disturb the surface area or otherwise interferer with their use by the Bureau of Land management. It is understood and agreed that the use of these areas for public purposes is superior to any other use. Areas to be excluded form direct drilling occupancy are:

1. Within 660 feet on either side of the right-of-way boundary of any and all improved roads and/or highways within the lease areas.

2. Within 100 feet on either side of the centerline of any and all trails within the lease area.

3. Within 300 feet of the normal high water line of any and all lakes, ponds, reservoirs and perennial streams located within the lease area.

4. Within 300 feet of any and all springs or water wells within the lease area.

The distances in subparagraphs 1, 2, 3, and 4, immediately above, may be changed when specifically agreed to in the "Surface Management Plan."

E. Where applicable, no access or work trail, earth cut or fill, structure development, facility or any other improvement of a permanent nature will be permitted if it can be viewed from the high water surface of the Missouri River.

F. A copy of the lease stipulations and the "Surface Management Plan" will be available on site to all operators working on the lease.

The undersigned hereby agrees the above requirements will be a part of the oil and gas lease terms and further agrees to abide fully with the "Surface Management Plan" as approved by the District Manager, Bureau of Land management.

_____
Lessee

_____
Date

SAMPLE

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
222 North 32nd Street
P.O. Box 36800
Billings, Montana 59107

_____
(Serial Number)

OIL AND GAS LEASE STIPULATIONS

ESTHETICS – To maintain esthetic values, all surface-disturbing activities, semipermanent and permanent facilities may require special design including location, painting and camouflage to blend with the natural surroundings and meet the intent of the visual quality objectives of the Federal Surface Managing Agency (SMA).

EROSION CONTROL – Surface-disturbing activities may be prohibited during muddy and/or wet soil periods.

CONTROLLED OR LIMITED SURFACE USE STIPULATION – This stipulation may be modified, consistent with land use documents, when specifically approved in writing by the Bureau of Land Management (BLM) with concurrence of the SMA. Distances and/or time periods may be made less restrictive depending on the actual onground conditions. The prospective lessee should contact the SMA for more specific locations and information regarding the restrictive nature of this stipulation.

The lessee/operator is given notice that the lands within this lease may include special areas and that such areas may contain special values, may be needed for special purposes, or may require special attention to prevent damage to surface and/or other resources. Possible special areas are identified below. Any surface use or occupancy within such special areas will be strictly controlled, or if absolutely necessary, excluded. Use or occupancy will be restricted only when the BLM and/or the SMA demonstrates the restriction necessary for the protection of such special areas and existing or planned uses. Appropriate modifications to imposed restrictions will be made for the maintenance and operations of producing oil and gas wells.

After the SMA has been advised of specific proposed surface use or occupancy on the leased lands, and on requires of the lessee/operator, the Agency will furnish further data on any special areas which may include:

100 feet form the edge of the rights-of-way from highways, designated county roads and appropriate federally owned or controlled roads and recreation trails.

500 feet, or when necessary, within the 25-year flood plain from reservoirs, lakes, and ponds and intermittent, ephemeral or small perennial streams: 1,000 feet, or when necessary, within the 100-year flood plain from larger perennial streams, river, and domestic water supplies.

500 feet from grouse strutting grounds. Special care to avoid nesting areas associated with strutting grounds will be necessary during the period form March 1 to June 30. One-fourth mile form identified essential habitat of state and federal sensitive species. Crucial wildlife winter ranges during the period form December 1 to May 15, and in elk calving areas, during the period from May 1 to June 30.

300 feet form occupied buildings, developed recreational areas, undeveloped recreational areas receiving concentrated public use and sites eligible for or designated as National Register sites.

Seasonal road closures, roads for special uses, specified roads during heavy traffic periods and on areas having restrictive off-road vehicle designations.

On slopes over 30 percent, or 20 percent on extremely erodable or slumping soils.

SAMPLE

NOTICE

APPLICATIONS FOR PERMIT TO DRILL (APDs) – The BLM district or resource area offices are responsible for the receipt, processing, and approval of APDs. The APDs are to be submitted by oil and gas operators pursuant to the requirements found in Onshore Oil and Gas Order No. 1 – Approval of Operations on Onshore Federal and Indian Oil and Gas Leases (Circular No. 2538). Additional requirements for the conduct of oil and gas operations on federal oil and gas leases can be found in Code of Federal Regulations Title 43, part 3160. Copies of Onshore Oil and Gas Order No. 1, and pertinent regulations, can be obtained from the BLM district offices in which the operations are proposed. Early coordination with these offices on proposals is encouraged.\

CULTURAL AND PALEONTOLOGICAL RESOURCES – The SMA is responsible for assuring that the leased lands are examined to determine if cultural resources are present and to specify mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator, unless notified to the contrary by the SMA, shall:

1. Contact the appropriate SMA to determine if a site-specific cultural resource inventory is required. If an inventory is required, then;

2. Engage the services of a cultural resource specialist acceptable to the SMA to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the area of proposed disturbance to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the SMA for review and approval no later than that time when an otherwise complete application for approval of drilling or subsequent surface-disturbing operation is submitted.

3. Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as testing salvage and recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the SMA, surface occupancy on that area must be prohibited.

The lessee or operator shall immediately bring to the attention of the SMA any cultural or paleontological resources discovered as a result of approved operations under this lease, and not disturb such discoveries until directed to proceed by the SMA.

ENDANGERED OR THREATENED SPECIES – The SMA is responsible for assuring that the leased land is examined prior to undertaking any surface-disturbing activities to determine effects upon any plant or animal species, listed or proposed for listing as endangered or threatened, or their habitats. The findings of this examination may result in some restrictions to the operator's plans or even disallow use and occupancy that would be in violation of the Endangered Species Act of 1973 by detrimentally affecting endangered or threatened species or their habitats.

The lessee/operator may, unless notified by the authorized officer of the SMA that the examination is not necessary, conduct the examination on the leased lands at his discretion and cost. This examination must be done by or under the supervision of a qualified resources specialist approved by the SMA. An acceptable report must be provided to the SMA identifying the anticipated effects of a proposed action on endangered or threatened species or their habitats.

APPENDIX E

May 6, 2002 RAC and RAC Subgroup Recommendations the BLM is Currently Implementing To Support Management of The Upper Missouri National Wild and Scenic River

❒ CAMPING OPPORTUNITIES

Important camping areas, such as the Level 2 sites Eagle Creek and Slaughter River, will accommodate both outfitters and private boaters.

Improve the design of the popular Level 2 sites such that competition among sites is reduced. Engage qualified landscape architects with knowledge of arid-semi arid vegetation conditions to assist in prototype models of campsite design.

The BLM will pursue easements on private land for camping opportunities in strategic locations along the river. The BLM will clarify the liability questions surrounding leases, easements and access.

Response
All of our camping areas currently accommodate both outfitters and private boaters, and we intend to continue this. We intend to use the RAC Subgroup to help us identify standards and indicators that will indicate when a campsite is receiving enough use and/or disturbance that may require we modify that campground. At that point, we would be interested in working with a landscape architect on different designs that would not only reduce competition for space, but help us lessen the overall impacts to the campground. If this happens, a short NEPA document of some type would be necessary.

Regarding easements, we are continually looking for opportunities. In the past, funding has been the limiting factor, and will most likely be so in the foreseeable future. As you are aware, liability has been an issue and we will get our Solicitor's opinion on who is liable should someone become injured on a BLM easement.

❒ IMPACT MONITORING

Identify indicators and standards to serve as trigger mechanisms to indicate when problems must be addressed. Once indicators are developed provide visitors with monitoring cards at each launch site that can be filled out on a voluntary basis. The BLM will do consistent, standardized monitoring.

Response
We are continuing to work with the University of Montana and the Subgroup to develop a base-line monitoring program and a set of standards and indicators that will serve as trigger mechanisms to indicate when we must make a change to lessen resource impacts. As part of this effort, a University of Montana graduate student is assisting us to complete a baseline campsite inventory and implement a campsite condition monitoring program this summer. The Subgroup intends to have the standards and indicators completed by the end of December this year.

❒ ALLOCATION SYSTEM

Continue to contract with the University of Montana to work with the subgroup and RAC to determine a system for access that is equitable to all user groups, to determine when and if such a system should be implemented, and to report in one year.

Response
We are continuing to work with the University of Montana and the Subgroup to develop a fair and equitable allocation system, should we get to that point where it is needed. The Subgroup intends to have this task completed by the end of December this year. If it becomes necessary to implement an allocation prior to completion of the RMP, a separate NEPA document, with public involvement, will be completed.

❒ MORATORIUM ON RIVER OUTFITTERS

While developing a series of indicators and the details of a fair and equitable system for any future river allocations, the RAC recommends a one-year extension of the moratorium on river outfitters and it will not be extended.

Response
We have implemented this recommendation, but had a very long discussion, with differing opinions, on whether or not to continue with the moratorium. We could find no resource based rationale to continue it, and felt we were in fact limiting competition and local economic opportunities with no benefits to the resource, other than possibly reducing competition for campsites in the White Cliffs section of the river.

We do understand the often emotional discussion that revolved around this issue, and combined with the fact that we don't have the standards and indicators in place that might tell us what level of visitor use is acceptable, we decided to extend the moratorium for an additional year.

❒ LINKAGE OF CAMPSITES TO HIKING OPPORTUNITIES

Communication vehicles should provide information about restrictions and private land issues adjacent to Level 1, 2, and 3 campsites. Conservation easements for recreation, such as at Little Sandy, should be identified on maps.

Response
Our volunteer hosts at Fort Benton, our hosts at Level 1 access sites, and our river rangers currently provide floaters with this type of information and will continue to do so, and we also post much of this information on our vault toilets and kiosks. We are also in the process of re-formatting our floaters guide, at which time we will identify all recreation easements along the river.

❒ PARKING FACILITIES

Parking facilities will be provided only at Level 1 sites.

Response
We have no intention at this time to add any additional parking facilities at any of our sites; however, as you know, the private landowner often times allows people to drive to the campground at Hole in the Wall. They must park outside the campground, but are able to use the public land to hike, picnic, fish, or drag a canoe to the river for floating. To keep cars in a consistent spot, it may become necessary to install some small signs identifying a parking area. If Chouteau County determines the road to Hole in the Wall is a County road, it may become even more important to identify an area for vehicles. By identifying a parking area, we intend to keep people from driving around the campground and to keep parked vehicles screened from observation by floaters coming past the campground.

❒ GUIDING VISITOR BEHAVIORS

Provide visitors with a simple card or insert with the river map on major behavior restrictions, responsibilities, personal risks, fire safety, and penalties (use of firewood, disposal of waste, etc.)

Response
This recommendation is an on-going activity; we are continually developing and/or updating inserts that we include in the information packets we mail to the public. We *are also currently developing a river log for handout at launch points. The log will provide basic information as outlined in the recommendation above and, additionally, provide a memento of the visitors' experience on the Upper Missouri.*

❒ COMMERCIAL DEVELOPMENTS AT CAMPSITES

While commercial developments are generally not encouraged, each commercial permit application will be evaluated based on its support of management objectives and the maintenance of the outstanding scenic and natural characteristics of the river corridor. There will be no permanent facilities (buildings, parking areas, etc.) devoted to commercial developments on BLM lands. However, commercial sales or rentals of items that may advance management objectives (for example, portable toilets), may be allowed within Level 1 sites-those major entry points to the river.

Response
We agree with this recommendation in principle. However, the West HiLine RMP Record of Decision (pages 5-6) states the BLM will encourage private sector initiatives in development of river visitor use opportunities, and that non-governmental entities can be used to accomplish goals compatible with the UMNWSR management objectives. To date, the BLM has received very few requests from the public for commercial permits at developed campgrounds, and we treat these requests on a case by case basis. These are discretionary actions and BLM approval would be based on a public need, and if the action is appropriate for the river and its' resources.

❒ LEVEL OF CAMPSITE DEVELOPMENT

Level 1, Developed public access site and campground: Campsites at road access points to the river are Wood Bottom, Coal Banks, Judith Landing, Woodhawk and Kipp. With the exception of Woodhawk, where infrastructure development will be sustained at the current level, these sites could have potable water, shelters, parking lots, picnic tables, vault toilets, check-in stations, boat launches, planted trees, interpretive signs, campground host facilities, and other infrastructure improvements that accommodate the transition from the highway system to the river corridor.

Level 2, Developed boat camp: Campsites at recreation locations that have experienced high levels of traditional use. Theses sites include Eagle Creek, Slaughter River, Hole-in-the Wall, and Little Sandy. Moderate levels of infrastructure may be encountered, including shelters, toilets, planted vegetation, irrigation, hardened campsites, and informational signs (signs at existing infrastructure only, such as on the walls of vault toilets). Administrative and emergency road access may be possible at Eagle Creek, Slaughter River, and Little Sandy.

Allow public access with evidence of a county road into the Hole-in-the-Wall Campground that allows hand carrying of non-motorized craft to or from the river. Infrastructure for boat launches or take-outs will not be constructed.

Level 3, Primitive boat camp: Sites are marked on maps and display modest but visible campsite signs from the river. Vegetation management may occur on established sites, including irrigation and artificial regeneration of trees. Fire rings are provided, but no other manufactured infrastructure developments, such as toilets, shelters, or picnic tables are allowed.

Level 4, Undeveloped public land: BLM lands without any infrastructure improvements. Only natural vegetation is present on the site.

Response
The above definitions coincide very closely with the definitions of what we call our Recreation Areas (Appendix E of the Upper Missouri National Wild and Scenic River Plan Update, 1993) along the river. As we work to re-format our floaters guide, we will use the above nomenclature for our camps along the river, and provide a description of opportunities and infrastructure available at each.

❒ THE USE OF INFORMATION TO DIRECT USE

Provide clear information on the campground classification system and identify all Level 1, 2 and 3 sites. Listings should be explicit and complete about the facilities provided, other nearby features, and any behavioral restrictions. Level 4 camping opportunities will not be identified in different communication media, but people will be made aware that unmarked, undeveloped Level 4 opportunities exist, and they may camp anywhere on BLM lands.

Response
Upon re-formatting our floaters guide, we will include the information in the above recommendation.

❒ SIGNAGE FOR PUBLIC LANDS AND CAMPSITE

Establish guidelines for small campsite sign placement on all Level 1-3 campsites. Signs may be placed that delineate private land boundaries or other sites that need to be marked (for example, on trails adjacent to private lands). Work with private landowners to identify the types of marking that are sensitive and fit well with the landscape.

Response
Upon re-formatting our floaters guide, we will then establish the guidelines for campsite sign placement at all Level 1-3 sites.

Regarding the signing of private land, we will work with private landowners as we are approached by them on specific problem areas. We are hesitant to encourage the signing of parcels of private land. Our fear is that if we sign only certain parcels of private land, floaters may assume whatever isn't signed is then public land, and we may actually increase trespass problems. However, if we are approached by a private landowner, we will work with them on a sign that fits well with the landscape.

❒ PROPOSED FEE SYSTEM

The BLM needs to prepare a schedule of proposed fees for individuals floating the river and present it to the RAC subgroup. It would be a fee demonstration site. Also need logistics of collecting fees.

Response
We have begun initial discussions on a proposed fee system associated with the Upper Missouri National Wild and Scenic River corridor and hope to have a system in place for the 2003 season. We are considering involving the RAC Subgroup as a "sounding board" and feedback mechanism as we develop this system. As we get closer to a final product, we will bring our proposal to the RAC for their review.

❒ THE NUMBER OF PEOPLE AT CAMPSITES OR WITHIN FLOATING PARTIES

Parties of 33 people or fewer could go down the river without a permit. Parties of 34-50 would require a special recreation use permit from the BLM which would allow for the BLM to make decisions on dispersal and launch days to manage impacts to the river.

Response
Beginning in 2003, we will implement the intent of this recommendation; however, we have no scientific data that will justify the above numbers. Following the development of standards and indicators of change we will have a better rationale to identify and justify party size and any other use limitations that may be necessary. We will adjust party size numbers from 33 to a more applicable number, if necessary, that is based on the indicators and standards being developed. Upon completion of the RMP, the above numbers may change.

❒ HUMAN WASTE AND REFUSE

Portable toilets will be required for all overnight campers. The BLM will construct a dump station at Judith Landing.

Response
The following message will be included with the standard information package sent to all Upper Missouri River boaters requesting floating information:

> *The BLM will implement a mandatory portable toilet regulation for the section of river between Judith Landing and Kipp Recreation Area. The regulation will go into effect on April 1, 2003. On April 1, 2004 the portable toilet regulation will encompass the entire river from Fort Benton to Kipp Recreation Area. Prior to this regulation being in place, we strongly recommend and encourage the use of portable toilets to minimize impacts on lands along the Upper Missouri River. The portable*

toilet must be a washable, reusable toilet system that allows for the carry-out and disposal of solid human waste into an authorized disposal system. We are not implementing the regulation on the White Cliffs section in 2003 because we are not assured of funding for a dump station at Judith Landing in our next years budget, and we are not comfortable requiring floaters to use porta-toilets through the White Cliffs section until a dump station is in place. Should we require their use in this section of the river before a dump station is installed, we have a fear they will be dumped in our vault toilets at the takeout point, or worse, elsewhere. Further, we would like to explore working with the private landowner at Judith Landing to install the dump station as part of the Undaunted Stewardship program.